

RAIL TRANSPORT

ANNUAL SAFETY REPORT 2012

DOCUMENT CONTROL		
Drafted by:	<p>Instituto da Mobilidade e dos Transportes, I.P.</p> <p>Avenida das Forças Armadas, nº 40</p> <p>1649-022 Lisbon</p> <p>Portugal</p>	
Approved by:	Executive Council	
Revised by:	José Pinheiro (Engineer)	
Drafted by:	Emídio Cândido (Engineer)	
Version/Revision:	01/2013	
Date:	23/09/2013	
Type of Document:	Report	
Document status:	Final	

CONTENTS

A.1 – Scope	4
A.2 – Summary.....	4
B – Introduction	5
C – Organisation of the IMT, I.P.	7
D – Development of railway safety	9
E – Relevant amendments to legislation and regulations	28
F – Development of safety certification and authorisation	29
G – Supervision of rail transport undertakings and the infrastructure manager	31
H – Application of the common safety method on risk evaluation and assessment	33
I – Conclusions	34
J – BIBLIOGRAPHY	36
L - ANNEXES.....	37
ANNEX A - STRUCTURE OF THE RAILWAY SYSTEM.....	38
ANNEX B - ORGANIZATION OF THE IMT, I.P.	38
ANNEX C - COMMON SAFETY INDICATORS AND DEFINITIONS USED	38
ANNEX D - RELEVANT AMENDMENTS TO LEGISLATION AND REGULATIONS	38
ANNEX E – DEVELOPMENT OF SAFETY CERTIFICATION AND AUTHORIZATION.....	38
ANNEX F – SIGNIFICANT ACCIDENTS 2012	38
ANNEX G – ACCIDENT PRECURSORS 2012.....	38

A.1 – Scope

The main aim of this report is to detail the activities carried out by the IMT, I.P. in its role as the National Railway Safety Authority during 2012, demonstrating developments that have taken place in railway performance and safety management in the transportation of passengers and goods via the National Railway Network.

This report does not include transportation that uses other guided transport systems such as metros, light rail, miniature trains, trams and passenger cableways.

A.2 – Summary

The Annual Safety Report for 2012 published by the IMT, I.P. aims to provide an overview of the activities of the Portuguese National Safety Authority, publishing the common safety indicators of 2012 and describing the most relevant occurrences in safety management that took place during the year.

In this report the safety performance of recent years is described and analysed in depth in order to anticipate trends that could be useful in deciding on future measures to improve safety in railways.

Activities performed in other guided transportation modes such as: metros, light rail, trams, cableways, etc., are outside the scope of this report.

B – Introduction

B.1 – Introduction to the report

The drafting and publication of this 2012 annual safety report discharges the legal requirement to publish an annual report on rail transport safety, pursuant to Article 66-O of Decree Law No 270/2003, as amended by Decree Law No 231/2007 of 14 June.

This report was produced in accordance with European Railway Agency (ERA) guidelines and recommendations for the content and structure of National Safety Authority annual safety reports.

This report sets out the safety-related activities carried out by the Public Institute for Mobility and Transport (IMT, I.P.), highlighting its initiatives for improving railway safety, and covers the publication of relevant safety rules, the development of safety certification and authorisation for undertakings and the supervision of their activities.

In addition to disclosing these activities, Annex C to the report also contains the Common Safety Indicators (CSIs) listed in Annex V of the above-mentioned Decree Law, which are used to measure and assess safety performance.

The data published in this report was taken from the annual safety reports of rail transport and infrastructure management undertakings, submitted to the IMT, I.P. in accordance with the provisions of Article 66-C of the above-mentioned Decree Law, and statistics supplied by Statistics Portugal (Instituto Nacional da Estatística - INE).

Accident data were checked for consistency, and confirmed using a participatory, transparent process involving rail transport undertakings and the infrastructure administrator, all of whom were given the opportunity to correct and amend the data, thereby ensuring the reliability of the data presented.

This report will be distributed in the following manner:

- Directly to the following recipients:
 - Ministry of the Economy;
 - European Railway Agency;
 - Gabinete de Investigação de Segurança e de Acidentes Ferroviários - GISAF [Rail Safety and Accident Investigation Bureau];
 - Infrastructure administrator and rail transport undertakings.
- It will also be made available to the public via the IMT, I.P. website.

B.2 – Structure of the railway system

Annex A provides a general description of the national rail network, and details of the undertakings dealing with rail network and infrastructure administration.

B.3 – Trends

B.3.1 – Accidents

The number of accidents in 2012 reversed the steep downwards trajectory of the last few years. Compared to the previous year of 2011 - the year with the best record since 2004, when records began to be kept in line with the definitions and methodology set out by the European Railway Agency - the number of accidents has risen by 33% and the number of fatalities by 71%, although both figures fall well below the average of the five previous years. (-36% for accidents and -29% for fatalities).

The most positive point to disclose is that for the second consecutive year there were no fatalities amongst either passengers or rail staff, meaning that the rail system is a particularly safe one for its users. The most serious accidents that occurred involved third parties, who typically were interacting with the railway system in an improper manner.

Furthermore, an increase in railway-related suicides was seen (+28%), reversing the downwards trend of the last two years.

The number of level crossings continues to decline, accelerated this year by the closure of some stretches of line to rail traffic as part of the implementation of the Strategic Transport Plan (-172 when compared to 2011, i.e. -16%). This reduction did not, however, translate to a decrease in fatal accidents at level crossings, a figure which increased by 100%.

B.3.2 – Developments in Safety Management

With the 2011 completion of the safety certification and authorisation process for all railway sector undertakings, 2012 saw the implementation and development of the safety-related activities that are part of the safety management systems within those undertakings. Of note is the commencement of the implementation of risk analysis on significant changes, carried out in accordance with the provisions of Commission Regulation No 352/2009/EC.

C – Organisation of the IMT, I.P.

Established by Decree Law No 147/2007, of 27 April, the IMT, I.P. took over the duties of several defunct organisations connected with passenger and freight land transport and other related activities (in relation to railways, it is the successor to the Instituto da Mobilidade e dos Transportes Terrestres, I.P. (Public Institute for Mobility and Inland Transport)) and on matters relating to drivers, transport staff, rolling stock and railway infrastructure.

The IMT, I.P. has a Rail Regulation Unit, which is functionally independent and has powers for economic and technical regulation of this sub-sector.

- To grant or refuse approval of safety management systems, applying penalties for inadequate performance.
- To inspect entities belonging to the land transport sector in the exercise of their activities, ensuring that the relevant system of violation monitoring is applied.
- To make decisions on the introduction of technical improvements in the rail and road sub-sectors, taking technological developments into account and with a view to improving safety and operating efficiency and reducing adverse environmental impacts.

C.1 – Mission

The mission of the IMT, I.P. is to regulate, monitor and take responsibility for coordinating and planning the land transport sector in order to meet the mobility needs of people and goods.

It is also responsible for supervising and regulating activities in this sector, and promoting safety, quality, and the rights of land transport service users.

C.2 – Safety

In relation to rail safety specifically, the IMT, I.P. carries out the functions of the National Safety Authority provided for in Directive 2004/49/EC of the European Parliament and of the Council of 29 April 2004 on safety of the Community's railways, and to that end it has the following statutory powers:

- To approve, ratify and certify rolling stock and equipment used in land transport systems, including railway infrastructure, ensuring fulfilment of technical and safety standards and authorising and supervising the bodies involved in the certification and inspection processes.

C.3 – Organisational chart

The IMT, I.P. organisational chart is presented in Annex B1.

C.4 – Staff

In order to fulfil its responsibilities in the road and rail transport sectors throughout Portugal, on 31/12/2012 the IMT, I.P. had a total of 751 employees.

For the specific purposes of regulating safety on guided transport systems such as railways, metros, light railways, miniature trains, trams and cableways, the IMT, I.P. has a Railway Infrastructure and Equipment Department, part of the Directorate for Technical Regulation and Safety Services, which at the end of 2012 employed:

- 1 Department Head;
- 4 Senior Technical Officers.

C.5 – Relations with other agencies

In fulfilling its responsibilities as the National Railway Safety Authority, the IMT, I.P. has institutional relations with various agencies, as shown in Annex B.2.

D – Development of railway safety

D.1 – Implementation of Directive 2004/49/EC (Railway Safety Directive)

Directive 2004/49/EC was partially transposed into Portuguese law, relative to safety aspects, by Decree-Law No 231/2007 of 14 June, which amended Decree-Law 270/2003 of 28 October, establishing mandatory safety certification and authorisation and common safety indicators, objectives and methods, and laying down the duties relative to safety of the rail sector regulator - the IMT, I.P.

The transposition of that Directive was completed by Decree-Law No 394/2007 of 31 December, which laid out the duties, powers and procedures of the Gabinete de Investigação de Segurança e de Acidentes Ferroviários - GISAF [Rail Safety and Accident Investigation Bureau], for carrying out technical investigations into accidents and incidents. The nature, mission and organisation of GISAF were laid out in Decree-Law No 395/2007 of 31 December.

In order to implement Decree-Law No 270/2003, as amended by Decree-Law No 231/2007, the following regulations were published in 2010:

- Regulation No 442/2010 on the issuing of safety authorisation.
- Regulation No 443/2010 on the issuing of safety certificates.

Even though the regulatory framework set out in Decree-Law No 270/2003, as amended by Decree-Law No 231/2007, had not yet been completed in 2010, the IMT, I.P. carried out work on examining safety management system approval and certification applications submitted by the various undertakings, based on the criteria and methods set out in Commission Regulations No 1158/2010/EU and No 1169/2010/EU on common safety methods for assessing conformity, and on requirements for obtaining safety certificates and safety authorisations, respectively. The guides and guidelines issued by the ERA in the form of published documents and the activities of the working groups in which the IMT, I.P. participates were also taken into account.

Given that the procedure for safety certification and authorisation was completed for all railway undertakings and the infrastructure manager in 2011, Directive 2004/49/EC can now be considered to be fully implemented.

D.2 – Initiatives for maintaining or improving safety

Tables D.2.1 and D.2.2, respectively, set out the principal initiatives related to maintaining and improving rail transport safety as a direct result of accidents; and other initiatives, either

new or continuing from previous years carried out by the IMT, I.P. or by the undertakings.

Table D.2.1 – Principal safety initiatives adopted following accidents.

Safety initiative	Accidents giving rise to the measure		
	Date	Place	Description
Maintenance of suspended circulation on the Tua line between the stations of Tua and Cachão	22/08/2008	Tua line	Derailment of passenger locomotive LRV 9503
Improvements to the maintenance and running gear of the series 933 coal transportation wagons.	26/10/2010	Southern line	Derailment of Train 66852
Risk analysis on conditions for crossing the lines at stations and halts/alighting points on the national rail network.	12/06/2011	Northern line	Collision with elderly person at Entroncamento station.

Table D.2.2 – Principal safety initiatives adopted for other reasons

Safety initiative	Reason
Maintaining suspension of traffic on the Corgo and Tâmega lines and on the Figueira da Foz branch line and the Beira Baixa line between Covilhã and Guarda	Improvements to operating conditions and traffic safety
Continuing the safety improvement programme for level crossings, eliminating 15 and reclassifying 31 level crossings	Eliminating/reducing the number of accidents associated with level crossings
Improvements to the conditions for crossing the lines at some stations	Eliminating/reducing accidents associated with crossing the lines at stations

D.3 – Analysis of trends

The data presented in this report were analysed and processed based on the common European definitions and methods developed by the European Railway Agency, and set out in Directive 2009/149/EC of 27 November, which amends Annex 1 of Directive 2004/49/EC (Railway Safety Directive), transposed into national law by Decree Law No 62/2010 of 9 June.

This section of the report provides a detailed analysis of trends revealed by the Common Safety Indicators over the nine-year period of 2004 to 2012.

It will also provide an analysis of the safety-related performance of the rail network in 2012 when compared with the average of the last five years as well as with the previous year's figures.

Annex C contains tables of numerical data, ratios and definitions used in analysing the Common Safety Indicators for 2012.

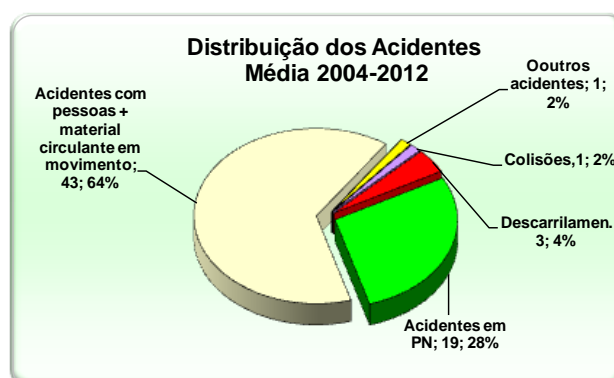
D.3.1 – Number of accidents

Type of Accident	2004	2005	2006	2007	2008	2009	2010	2011	2012	Average
Total number of accidents	115	87	89	93	73	43	42	27	36	67
Train collisions, including collisions with obstacles within the clearance gauge	1	1	3	3	0	0	2	1	1	1
Train derailments	3	1	9	3	3	1	3	2	0	3
Accidents at level crossings, including those involving pedestrians	33	22	22	27	20	15	14	7	11	19
Accidents to persons caused by rolling stock in motion, excluding suicides	78	63	55	56	49	27	22	17	23	43
Fires on rolling stock	0	0	0	0	0	0	0	0	0	0
Other accidents	0	0	0	4	1	0	1	0	1	1
Suicides	25	39	40	52	50	69	51	42	58	47

The number of accidents in 2012 rose in comparison to 2011 (+33.3%), although it remained substantially below the average of the last five years (–18%); this was mainly due to a greater number of accidents at level crossings (+57%) and accidents involving persons caused by rolling stock in motion (+35%).

Over the years, it has become the norm within our railway system, as well as in the rest of Europe, for most accidents to occur in two categories: accidents to persons caused by rolling stock in motion, and accidents taking place at level crossings.

Analysis of the adjacent chart shows that accidents caused by activities intrinsic to railway operations, such as collisions, derailments and fires on rolling stock, represent only a small proportion of the total (6%); their relatively constant frequency over time is also confirmed.



<i>Legend</i>	<i>Translation</i>
Distribuição dos Acidentes Média 2004-2012	Breakdown of Accidents Average 2004-2012
Acidentes com pessoas + material circulante em movimento: 43; 64%	Accidents involving people + rolling stock in motion: 43; 64%
Outros acidentes: 1; 2%	Other accidents: 1; 2%
Colisões: 1; 2%	Collisions: 1; 2%
Descarrilamen.: 3; 4%	Derailment: 3; 4%
Acidentes em PN; 19; 28%	Accidents at LCs: 19; 28%

For the ninth year running, no accidents were reported due to fires on rolling stock.

this category is 9% higher than the average over the last five years.

The breakdown of accidents and their relative weightings remained practically unchanged when compared to the previous year, with accidents to persons caused by rolling stock in motion accounting for 64% of occurrences, and 30% taking place at level crossings.

Charts indicating changes in the pattern of accidents over the 2004-2012 period and trends relative to accidents are given on page 13.

Analysis of these charts continues to show a clear trend towards lower total accident figures, mainly due to reductions in the number of the most frequent types of accident: those to persons caused by rolling stock in motion and accidents at level crossings.

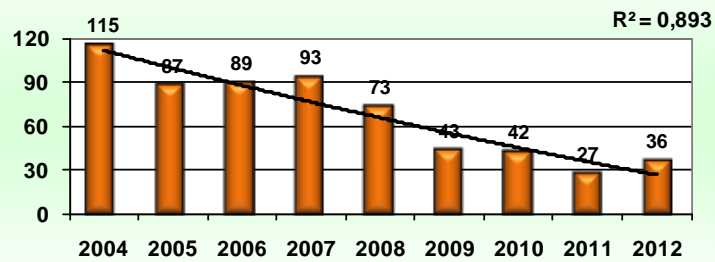
It is also clear from these charts that the drop in the number of accidents at level crossings reflects the positive impact of the accident prevention and crossing improvement programme implemented by the infrastructure manager, as well as the media campaigns for raising public awareness that have been carried out.

The absence of derailments in 2012 is notable, the first time that this situation has occurred since 2004.

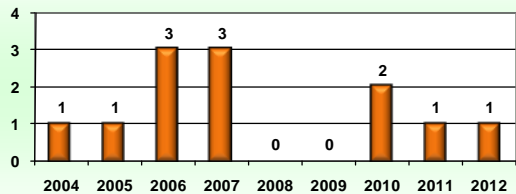
The frequency of other significant accidents that do not fall within the main categories are still below the threshold of statistical significance.

In relation to suicides, which are analysed in detail in section D.3.3., 2012 saw a reversal of the downward trend seen in the two previous years. There was a 38% increase in this figure in relation to the previous year, meaning that

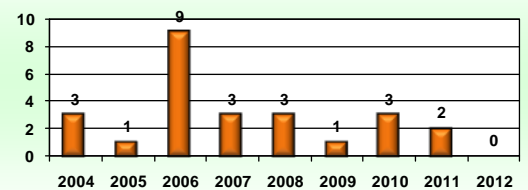
Nº TOTAL DE ACIDENTES



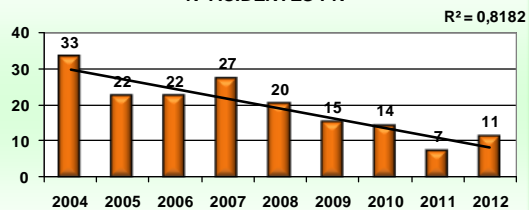
Nº COLISÕES



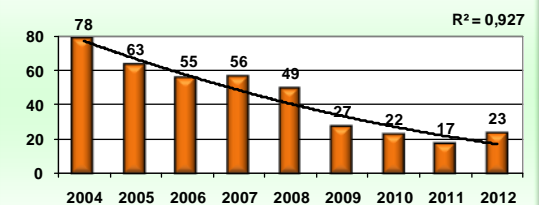
Nº DESCARRILAMENTOS



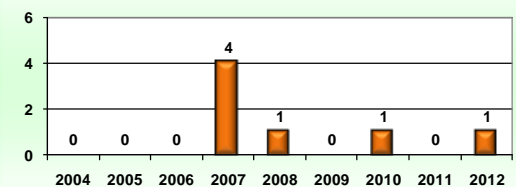
Nº ACIDENTES PN



Nº ACID. PESSOAS+MC



Nº OUTROS ACIDENTES



Legend:	Translation
Nº TOTAL DE ACIDENTES	TOTAL NO OF ACCIDENTS
Nº COLISÕES	NO OF COLLISIONS
Nº DESCARRILAMENTOS	NO OF DERAILMENTS
Nº ACIDENTES PN	NO OF ACCIDENTS AT LCs
Nº ACID. PESSOAS+MC	NO ACCIDENTS PERS. + ROLLING STOCK
Nº OUTROS ACIDENTES	NO OF OTHER ACCIDENTS

D.3.2 – Fatalities

D.3.2.1 – Fatalities per type of accident

Type of accident	2004	2005	2006	2007	2008	2009	2010	2011	2012	Average
Total for all accidents	72	47	53	58	42	32	22	14	24	40
Train collisions, including collisions with obstacles within the clearance gauge	0	0	0	0	0	0	0	0	0	0
Train derailments	3	0	0	3	1	0	0	0	0	1
Accidents at level crossings, including those involving pedestrians	26	11	18	20	15	17	11	4	8	14
Accidents to persons caused by rolling stock in motion	43	36	35	35	26	15	11	10	16	25
Fires on rolling stock	0	0	0	0	0	0	0	0	0	0
Other accidents	0	0	0	0	0	0	0	0	0	0

In 2012, the number of fatalities resulting from railway accidents reversed the strong downwards trend registered over the last few years, rising by 71% relative to 2011, although it is still significantly below the average.

In Portugal, as in other European countries, the overwhelming majority of fatalities (98%) involve people using railway property improperly, either by trespassing or by failing to observe the rules at level crossings. In 2012, as in 2011, the only fatalities that occurred were in these two categories, evidencing the high degree of safety that the rail system offers to its users and staff.

The accidents resulting in the most fatalities are, on average, those caused by rolling stock in motion (almost two thirds) and those occurring at level crossings (one third).

In 2012 there were again no fatalities as a result of derailments or collisions. Although these types of accidents attract more intense media attention and cause greater social impact, they accounted for only 2% of fatalities over the past 9 years.

The positive effect of increased safety on the railway system is reflected in the fact that, over the last 9 years, there have been no fatalities caused by train collisions.



<i>Legend</i>	<i>Translation</i>
Distribuição Mortos por Tipo de Acidente: Média 2004-2012	Breakdown of fatalities by type of accident: Average 2004-2012
Pessoas + Mat. Circ.: 63%	Persons + Rolling Stock: 63%
Descarril.: 2%	Derailment: 2%
PN: 35%	LCs: 35%

D.3.2.1 – Fatalities by category of person

Category of person	2004	2005	2006	2007	2008	2009	2010	2011	2012	Average
Total of all categories	72	47	53	58	42	32	22	14	24	40
Passengers	0	0	0	1	3	0	1	0	0	1
Employees	3	2	1	5	1	1	1	0	0	2
LC users	26	11	18	20	15	17	11	4	8	14
Unauthorised persons	43	33	34	32	23	14	9	10	16	24
Others	0	1	0	0	0	0	0	0	0	0

Regarding the category of people killed in railway accidents (see table and chart on this page), 2011 saw a significant increase in the categories of LC users (+100%) and unauthorised persons (+60%) in relation to 2012, although both figures remain below average. Therefore, 2011 was a year in which the accident rate was particularly low, with the increase in fatalities observed in 2012 arising exclusively from external factors over which the rail system has limited control - trespass on rail property and incorrect usage of level crossings.

2012 was the second consecutive year in which there were no accident-related fatalities amongst either passengers or rail staff. In comparison to the previous year, in 2012:

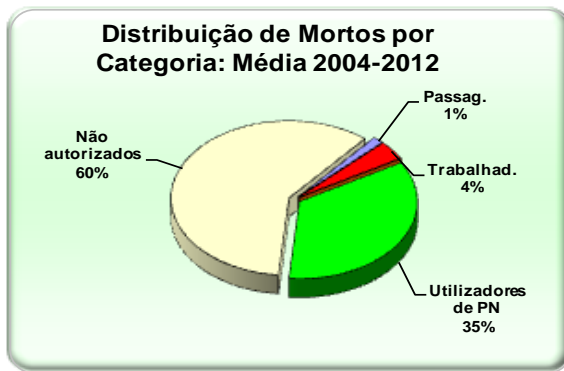
Passengers: unchanged (0)
Employees: unchanged (0)
LC users: +4
Unauthorised persons: +6
Other persons: unchanged (0)
Total: +10

The average breakdown over the past nine years shows that the overwhelming majority (95%) of fatal accidents involve the two categories of persons external to railway

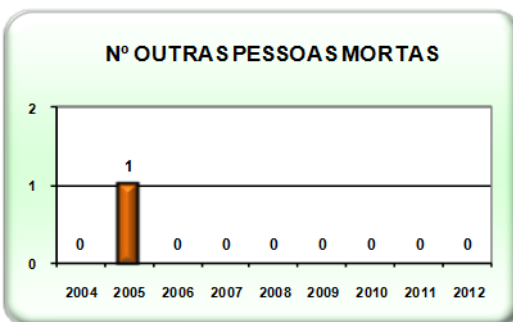
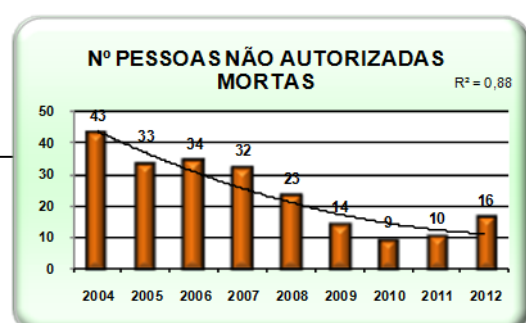
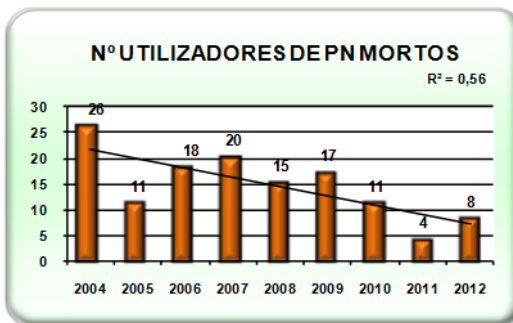
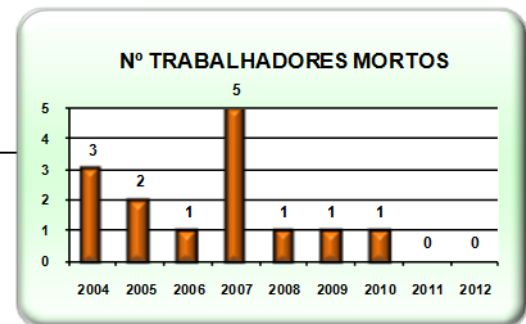
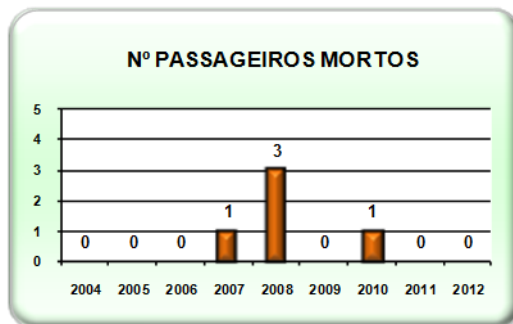
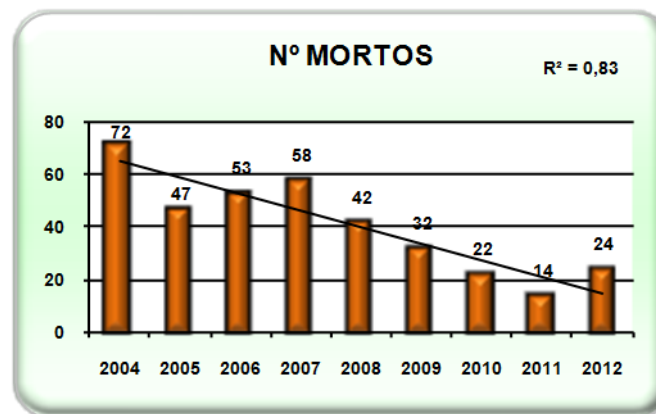
operations - "Unauthorised persons on railway property" and "LC users".

Records show that rail transportation is particularly safe for users, as only 1% of people killed in railway accidents are passengers.

The trend shows a clear and consistent drop in the number of fatalities due to railway accidents over the last nine years (see charts on next page), which is obviously very positive and correlates directly with the measures taken to reduce the number of level crossings and modernise those that remain, as well as with improvements to management of risks associated with traffic safety, which is directly reflected in the lack of fatalities amongst passengers and rail staff over the last two years.



Legend	Translation
Distribuição de Mortos por Categoria: Média 2004-2012	Breakdown of fatalities by category: Average 2004-2012
Não autorizados: 60%	Unauthorised: 60%
Passag.: 1%	Passengers: 1%
Trabalh.: 4%	Rail staff: 4%
Utilizadores de PN: 35%	LC users: 35%



Legend	Translation
Nº MORTOS	NO OF FATALITIES
Nº PASSAGEIROS MORTOS	NO OF FATALITIES - PASSENGERS
Nº TRABALHADORES MORTOS	NO OF FATALITIES - RAIL STAFF
Nº UTILIZADORES DE PN MORTOS	NO OF FATALITIES - LC USERS
Nº PESSOAS NÃO AUTORIZADAS MORTAS	NO OF FATALITIES - UNAUTHORISED PERSONS
Nº OUTRAS PESSOAS MORTAS	NO OF FATALITIES - OTHERS

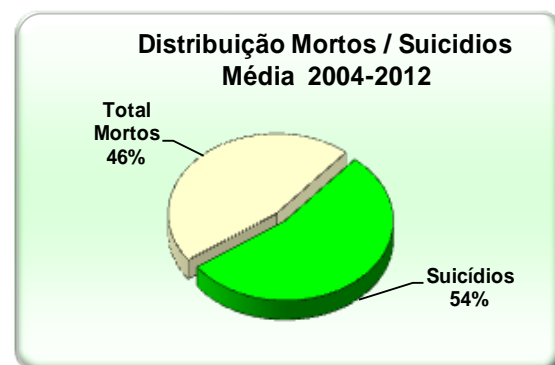
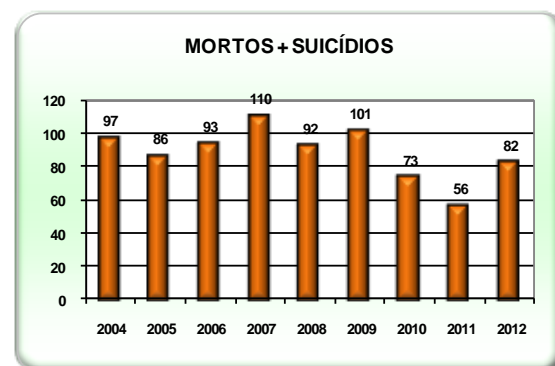
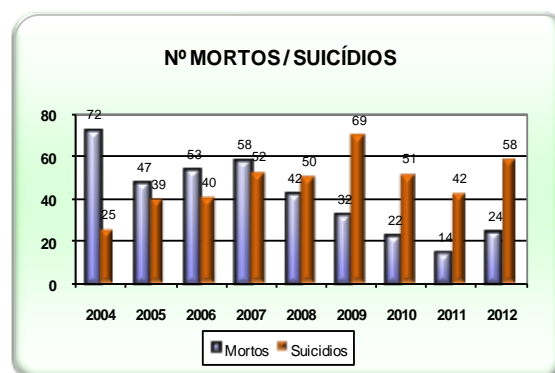
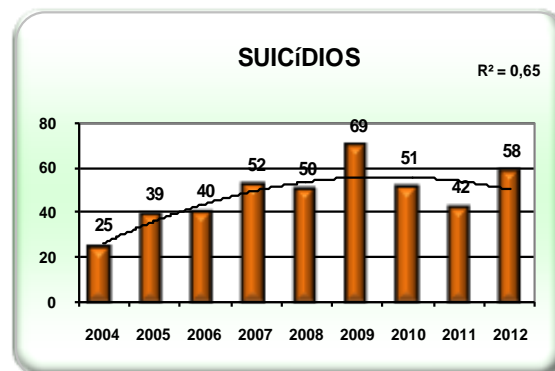
D.3.3 – Fatalities due to Suicide

It must be noted that suicides are not classified as accidents, as they are voluntary and deliberate acts carried out with the intention of harming those who commit them. However, despite not being considered accidents, suicides are a personal and social tragedy and are also, on various levels, a major cause of disruption in rail transport.

The data reveals that suicides peaked in 2009 and then decreased significantly in subsequent years, although in 2012 a renewed upward trend was recorded relative to 2011 and 2010. Analysis of the charts shows that in relation to both total number of fatalities and suicides, the recent trend is downwards, indicating clearly that the safety of the system has increased.

An interesting statistic for assessing the impact of suicides on the rail system is to see how to what extent these contribute to total fatalities on railway property. The chart shows that, on average, the number of suicides already exceeds fatalities from accidents. (54% suicide vs 46% accident).

Another interesting observation is that while the total number of fatalities on railway property (accidental deaths and suicides) has risen and fallen over the years, with the lowest number of fatalities on railway property occurring in 2011, the last nine years have not yet shown a clearly defined decrease in the total number of fatalities.



<i>Legend:</i>	
SUICÍDIOS	SUICIDES
Nº MORTOS/ SUICÍDIOS	NO OF FATALITIES/SUICIDES
MORTOS + SUICÍDIOS	FATALITIES + SUICIDES
Distribuição Mortos / Suicídios Média 2004-2010	Breakdown Fatalities/Suicides, Average 2004-2010

D.3.4 – Serious Injuries

Category	2004	2005	2006	2007	2008	2009	2010	2011	2012	Average
Total injuries (all categories)	50	44	33	34	39	18	16	10	16	26
Passengers	11	7	8	5	6	4	3	2	3	5
Employees	3	0	2	2	2	2	2	0	0	1
LC users	12	15	9	8	10	5	3	3	5	7
Unauthorised persons	24	22	12	18	20	7	8	5	7	12
Others	0	0	2	1	1	0	0	0	1	1

The number of serious injuries has fallen significantly and consistently over the past nine years. Nevertheless, as with fatalities the number of serious injuries in 2012 went up relative to 2011 (+60%), interrupting a three-year consecutive decrease.

Broken down by category, the distribution pattern for serious injuries is similar to that for fatalities, with the overwhelming majority of injuries suffered by unauthorised persons and level-crossing users (73%).

Average distribution between 2004 and 2012 continues to show the existence of a not insubstantial percentage of injury victims who are passengers (19%), in contrast to fatalities, in which passengers represent only 1% of the total.



<i>Legend</i>	<i>Translation</i>
Distribuição de Feridos por Categoria: Média 2004-2012	Breakdown of Injuries by Category: Average 2004-2012
Não autorizados: 46%	Unauthorised: 46%
Utilizadores de PN: 27%	LC users: 27%
Outros: 4%	Others: 4%
Trabalhadores: 4%	Employees: 4%
Passageiros: 19%	Passengers: 19%

D.3.5 – Risk to society

Category of person	2004	2005	2006	2007	2008	2009	2010	2011	2012	Average
Total for all accidents	2.03	1.32	1.43	1.5	1.1	0.83	0.59	0.4	0.68	1.1
Passengers	0.03	0.02	0.02	0.04	0.09	0.01	0.03	0.01	0.01	0.03
Employees	0.09	0.05	0.03	0.13	0.03	0.03	0.03	0	0	0.04
LC users	0.72	0.32	0.48	0.51	0.38	0.43	0.28	0.12	0.23	0.38
Unauthorised persons	1.19	0.9	0.9	0.82	0.6	0.36	0.25	0.28	0.45	0.64
Others	0	0.03	0.01	0	0	0	0	0	0	0

A useful method for analysing overall trends in railway accidents and the risks to which society is exposed by rail transport involves calculating a standard index that takes into account the number of fatalities and severe injuries during the year, and distances travelled by trains.

This indicator is calculated by dividing the total number of fatalities and weighted serious injuries (FWSI) by the distance in millions of train-kilometres travelled during the year in question. For the purposes of calculating the index, one weighted serious injury is regarded as statistically equivalent to 0.1 fatalities.

The trend indicates a clear reduction over the past nine years in the overall risk to society posed by the railway network, as shown in the first chart on the next page, although 2012 was not as satisfactory as more recent years.

The various risk categories are shown in the respective charts, indicating a clear downward trend in the risk for category

'Unauthorised persons on railway premises' and now also for 'LC users'.

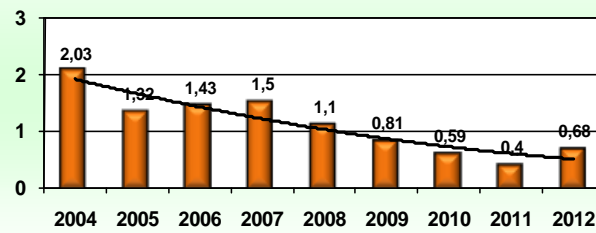
As the charts show the individual categories represented to the same scale, it is clear that the contribution made by passengers, employees and others, when compared to the overall risk, is small (see chart below).



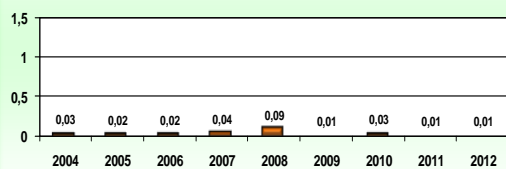
Legend	Translation
Distribuição de MFGP por Categoria: Média 2004-2012	Breakdown of FWSI by category: Average 2004-2012
Pessoas não autorizadas; 59%	Unauthorised persons; 59%
Passageiros 3%	Passengers 3%
Trabalhad. 3%	Employees 3%
Utilizadores de PN; 35%	LC users; 35%

Indice MFGP x 10⁻⁶

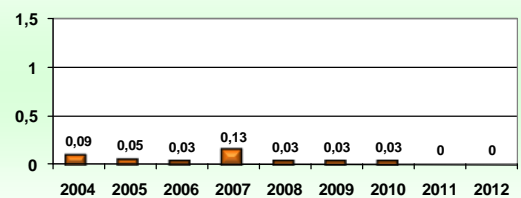
$R^2 = 0,86$



**Indice MFGP x 10⁻⁶
Passageiros**

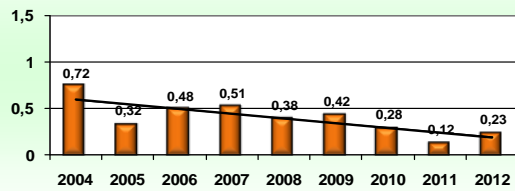


**Indice MFGP x 10⁻⁶
Trabalhadores**



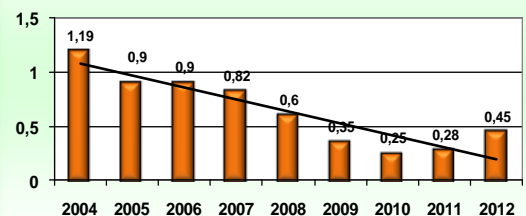
**Indice MFGP x 10⁻⁶
Utilizadores PN**

$R^2 = 0,63$

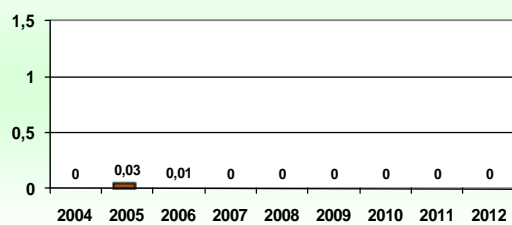


**Indice MFGP x 10⁻⁶
Pessoas não autorizadas**

$R^2 = 0,83$



**Indice MFGP x 10⁻⁶
Outras pessoas**



<i>Legend</i>	<i>Translation</i>
Indice MFGP x 10 ⁻⁶	FWSI index x 10 ⁻⁶
Indice MFGP x 10 ⁻⁶ Passageiros	FWSI index x 10 ⁻⁶ Passengers
Indice MFGP x 10 ⁻⁶ Utilizadores PN	FWSI index x 10 ⁻⁶ LC Users
Indice MFGP x 10 ⁻⁶ Outras pessoas	FWSI index x 10 ⁻⁶ Other Persons
Indice MFGP x 10 ⁻⁶ Trabalhadores	FWSI index x 10 ⁻⁶ Employees
Indice MFGP x 10 ⁻⁶ Pessoas não autorizadas	FWSI index x 10 ⁻⁶ Unauthorised persons

D.3.6 – Accident precursors

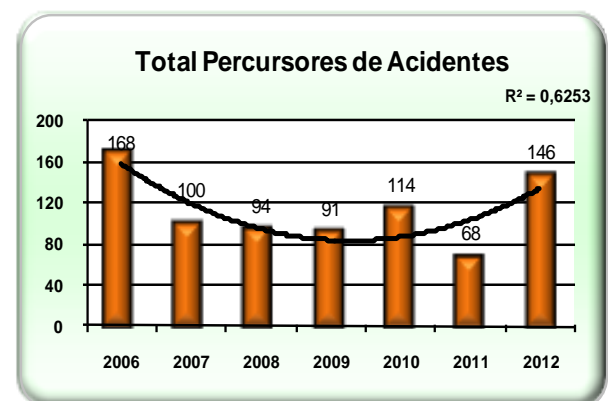
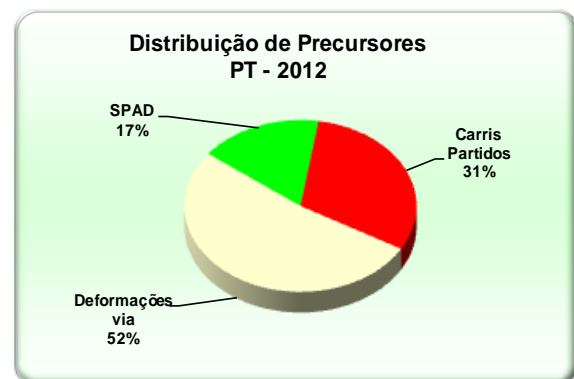
Accident precursors	2006	2007	2008	2009	2010	2011	2012	Average
Total No of incidents and near misses	168	100	94	91	114	68	146	112
Broken rails	45	39	33	35	50	21	45	38
Buckles on track	95	40	37	44	56	24	76	53
Failures in lineside signals	0	0	0	0	1	0	0	0.1
Signals passed at danger (SPAD)	24	20	24	12	6	22	25	19
Broken wheels on rolling stock in operation	1	0	0	0	0	0	0	0.1
Broken axles	3	1	0	0	1	1	0	0.9

After dropping continually since 2006, in 2010 total accident precursors (incidents and near misses) underwent a reversal to the trend, accentuated by the negative result registered in 2012 which saw precursors rising by 115% versus 2011.

In relation to the average distribution of accident precursors for the 2006-2012 period, there are three main categories: track buckles, broken rails and SPADs.

The significant increase relative to broken rails and track buckles in 2012 was possibly caused by the adverse weather conditions that occurred during the winter of that year.

In the case of SPADs, the trend was unfavourable in 2012 with a sharp increase over the previous year (+14%). Out of all the years with data collected to date, this was the year in which the highest number of accidents of this type was recorded. Given that this is one of the accident precursors with the greatest impact on safety, this increase is a cause for concern, and the reasons for it must be investigated and remedied.



<i>Legend</i>	<i>Translation</i>
Distribuição de Incidentes Média 2006-2011	Average distribution of incidents 2006-2011
Defrom.via 44%	Track buckles 44%
Carris partidos 39%	Broken rails 39%
Falha sinalização 0,25%	Signal failures 0.25%
SPAD 16%	SPAD 16%
Ruptura eixos 0,50%	Broken axles 0.50%

Total accident precursors	Total accident precursors
---------------------------	---------------------------

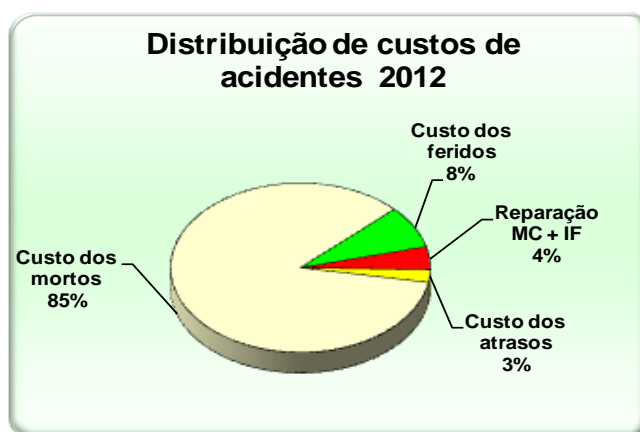
D.3.7 – Cost of accidents

Cost of accidents (in millions of Euros)	2006	2007	2008	2009	2010	2011	2012	Average
Total cost	52.11	60.25	47.69	33.59	26.29	15.75	24.96	37.00
Fatalities	47.24	54.96	40.54	30.32	21.2	13.41	22.27	32.64
Serious injuries	3.93	4.31	5.03	2.28	2.06	1.28	1.99	2.96
Cost of replacing or repairing damaged rolling stock and infrastructure	n/a	n/a	0.75	0.6	2.243	0.69	0.24	0.90
Cost of delays	0.94	0.98	1.37	0.39	0.79	0.38	0.46	0.76

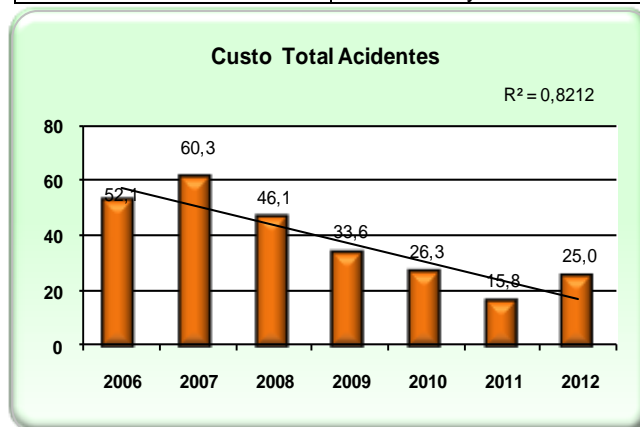
The cost of accidents was determined using the method developed by the ERA for calculating the Common Safety Indicators. Using this methodology, the cost of accidents is evaluated from the point of view of the costs that society as a whole would have saved if the accidents causing deaths, injuries and delays in passenger and freight train traffic had been prevented (see details in Annex C).

The values were calculated from the figures defined for Portugal in tables 1, 2 and 3 of Annex C, corrected on a linear basis by the growth factor in per capita GDP between 2002 and 2012, which according to ERA data obtained from Eurostat is 1.16.

Given that in 2012 there was a significant increase in accidents relative to 2011, with a respective increase in personal injury and material damage, the cost of accidents to society grew substantially relative to 2011 (+58%).



Legend	Translation
Distribuição de custos de acidentes 2012	Breakdown of accident costs in 2012
Custo dos mortos 85%	Costs relative to fatalities 85%
Custos dos feridos 8%	Costs of injuries 8%
Reparação MC+IF 4%	Repairs RS +IF 4%
Custo dos atrasos 3%	Cost of delays 3%



Custo Total Acidentes	Total Accident Cost
-----------------------	---------------------

D.3.8 – Indicators for technical safety of the infrastructure

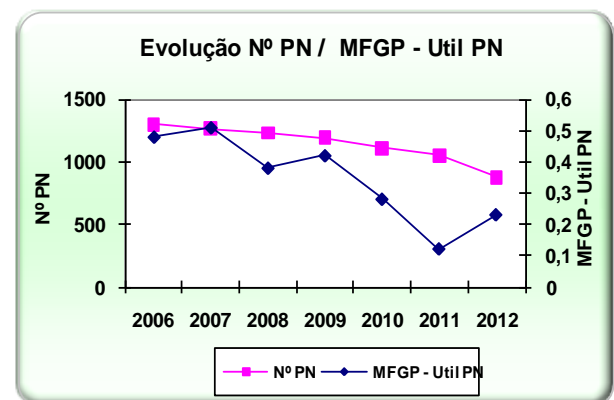
Technical characteristics of tracks	2006	2007	2008	2009	2010	2011	2012
% lines with Automatic Train Protection (ATP) operational	50.3%	50.8%	51.3%	51.3%	52.6%	58.6%	64.5%
% of train-kilometres travelled using operational ATP systems	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	88.9%
Total number of level crossings	1297	1266	1229	1191	1107	1049	877
Number of LCs per kilometre of track	0.37	0.36	0.35	0.34	0.31	0.3	0.35
Number of LCs per kilometre of line	0.46	0.45	0.43	0.42	0.39	0.375	0.252
% of level crossings with automatic or manual protection	39.3%	38.2%	37.3%	39.7%	41.9%	43.6%	52.1%

The indicators on the technical safety of infrastructure show that, in 2012, there was continued improvement in technical safety conditions relative to previous years, particularly noticeable in the reduction of the number of LCs and in the increased coverage of the CONVEL speed control system. This occurred mainly due to the closure of stretches of line as part of the implementation of the Strategic Transport Plan. The fact that these stretches of line were not modernised - did not have CONVEL and with numerous level crossings - led to an improvement in the indicators across the remaining operational network.

The following chart confirms that in relation to category “Level Crossings”, which has recorded the greatest improvement and to which the government has dedicated substantial financial resources, the reduction in the number of level crossings in 2012 did not lead to a decrease in the accident rate. In fact, the opposite is true, as the figure went up. Progress over the years is, however, clearly positive, even though its course is not always smooth.

It is seen that 2012 was also the year in which 253.063 km of rail line was decommissioned, as follows:

- Alentejo line: Beja – Ourique (49.467 km);
- Tua line: Tua - Cachão (41.650 km);
- Tâmega line: Livração – Arco do Baúlhe (12.770 km)
- Corgo line: Régua – Chaves (25.069 km)
- Figueira da Foz branch: Figueira da Foz to k.p. 48.470 (48.470 km)
- Cáceres branch: Torres das Vargens – Marvão (72.443 km)
- Sines branch: Sines junction - Sines (3.195 km)



Legend	Translation
Evolução Nº PN / MFGP – Util PN	Trend in No of LCs/ FWSIs - LC users
Nº PN	No of LCs
MFGP. Util PN	FWSI. LC users

E – Relevant amendments to legislation and regulations

E.1 – National legislation

The most important legislative documents published in 2012 in the area of rail transport were:

- **Decree Law No 182/2012:** Transposes Directive 2011/18/EU, of the European Commission, of 1 March, which amends Annexes II, V and VI of Directive 2008/57/EC, of the European Parliament and of the Council, relative to the interoperability of the rail network in the Community, being the first amendment to Decree-Law No 27/2011 of 17 February.
- **Decree-Law No 206-A/2012:** Is the first amendment to Decree-Law No 41-A/2010, of 29 April, and deals with the inland transport of dangerous goods, transposing Directive 2010/61/EU, of the European Commission, of 2 September, and ensuring that the regime of certification relative to training entities for safety advisors and drivers of vehicles carrying dangerous goods agrees with Decree-Law No 92/2010 of 26 July.

- **1st amendment to RGS XII – Prohibited routes**

A variety of amendments reinforcing conditions relative to traffic movement on prohibited routes.

- **3rd amendment to IET 77 – Norms and safety procedures when working on infrastructure**

Establishment of a new telegram form for improvement to working safety conditions.

E.2 – Technical safety regulations

The most significant documents drawn up for the development of mandatory technical safety regulations (RGS), and published by the IMT, I.P. in 2012, were the following:

- **29th amendment to general instructions No 7 (IG7) – Staff levels on trains**
Conditions were established for the running of goods trains without the need for an assistant driver.
- **46th amendment to RGS II – Signals**
Introduction of a signal with a “Conditional Warning” position – indicating the presence of CONVEL balises without permanent stop information.

F – Development of safety certification and authorisation

F.1 – National Legislation

Decree-Law No 231/2007, which introduced the amendments to Decree-Law No 270/2003 necessary for the transposition of Safety Directive 2004/49/EC of 29 April, came into force on 14 June 2007. Hence from that date, a new system came into force for safety certification of railway undertakings, and the obligation was introduced for the infrastructure manager to have a safety authorisation in order to carry out its activities.

The relevant legal documentation for preparation of safety certification and authorisation procedures can be found on the IMT, I.P. website.

Other supporting documentation that may be required for applications, such as a list of railway-related legislation and regulations, is available in the Network Directory (published by REFER). Applicants can obtain these safety regulatory documents from the IMT, I.P. on request.

the Part A and Part B safety authorisation to REFER.

Three amendments to Part B safety certificates were issued in 2012.

Annex E gives detailed numerical data relating to the development of safety certification and authorisation in 2012.

F.2 – Numerical data

Portugal issued its first Railway Safety Certificate in 2007 in response to an application submitted by the rail transport undertaking Fertagus on 10 November 2006. The certificate was issued on 10 May 2007 under the safety certification arrangements introduced by the original Decree-Law No 270/2003, which transposed Directive 2001/14/EC of 26 February.

Parts A and B of the first safety certificates were issued in 2008 by the IMT, I.P. under the new legal regime, and this process continued in 2009 due to the founding of a new undertaking (CP Carga), and the development and geographical expansion of the activities of another undertaking (TAKARGO).

In 2011, the safety certification process of all the railway undertakings was completed with the issue of Part A and Part B safety certificates to the undertakings CP-Comboios de Portugal and FERTAGUS, and the issue of

F.3 – Reference documents for the procedures

Applications for Safety Certificate Part A, confirming the existence of an approved safety management system, were assessed according to criteria harmonised at the European level, which were developed by a European Railway Agency working group of which the IMT, I.P. is a member. This work ultimately resulted in the publication of Commission Regulations No 1158/2010/EU and No 1169/2010/EU with the Common Safety Methods for assessing conformity with the requirements for obtaining railway safety certificates and safety authorisations, respectively.

Applications for safety certificate Part B were examined according to assessment criteria set out in documents produced by the above-mentioned ERA working group and in Commission Regulation (EC) No 653/2007 of 13 June (on the use of a common European format for safety certificates and application documents in accordance with Article 10 of Directive 2004/49/EC of the European Parliament and of the Council and on the validity of safety certificates issued under Directive 2001/14/EC) and the above-mentioned Regulation 1158/2010/EU.

Safety authorisation applications were examined on the basis of Regulation 1169/2010/EU on the Common Safety Method for assessing conformity with the requirements for obtaining safety authorisations.

Applications continued to be assessed rapidly and certificates issued speedily, thanks to effective dialogue and closer relations between the IMT, I.P. and the railway undertakings, and fell well within the statutory deadline of four months.

G – Supervision of rail transport undertakings and the infrastructure manager

G.1 – Description of supervision

A variety of procedures are used in supervising the activities of the infrastructure manager and railway transport undertakings:

- Analysis of occurrences recorded in the daily traffic report drawn up by REFER;
- Planned monitoring activities;
- Monitoring initiated after analysis of events relating to accidents or incidents, claims/complaints or recommendations made by a board of enquiry;
- Audits of Safety Management Systems.

Monitoring is always carried out by IMT, I.P. staff, who may ask personnel from the undertakings under inspection for assistance in carrying out the work necessary for such monitoring.

G.2 – Annual safety reports by rail transport undertakings and the infrastructure manager

In May 2012, an update was carried out on the regulatory documents that set out the framework necessary for standardising the way in which all undertakings draft their annual safety reports. Documents republished were: IET 78 – Report template, IET 79 – Definitions for the analysis of Common Safety Indicators and ICET 179 - Table of Common Safety Indicators. These documents are in line with the recommendations and guidelines devised by the European Railway Agency and Decree-Law No 62/2010, which establishes the Common Safety Indicators and their definitions and calculation methods, thereby completing the necessary legal framework for the preparation of standardised annual safety reports at Community level.

In compliance with their statutory obligations, each undertaking produced and submitted its own safety report for 2012 to the IMT, I.P.

In regard to compliance with the legal requirements concerning the content of the report, the quality and format of the information provided was generally compliant with the regulatory requirements, making the reports easier to understand and analyse.

G.3 – Supervision carried out

During 2012, supervision of activities carried out by the undertakings entailed daily monitoring of occurrences relative to rail operations, and the conducting of inspections.

The following main inspection activities relative to railway operation were conducted:

- Inspection of traffic movement conditions for regional and long-distance trains run by CP, - Comboios de Portugal, on the Northern line;
- Inspection of railway operations run by CP Carga at Entroncamento;
- Inspection of railway operations run by Takargo at the TVT terminal;
- Inspection of safety conditions for shunters on rail carriages belonging to CP – Carga;

Inspection of operating activities carried out by Fertagus.

Each of these inspection activities was conducted by two or three staff members from among the four people who normally carry out this type of work, which takes up around 5% of the total working hours of staff at the Department of Railway Infrastructure and Equipment.

G.4 – Corrective measures

As a result of inspection activities, both the infrastructure manager and the transport undertakings implemented corrective measures, which included:

Improvements to procedures relative to maintenance and to the replacement of gear on the rail carriages operated by Takargo.

- Study of the possible need to change the operator handle position on flat wagons of the Lgnss 45' series and Sgnss 60' series belonging to CP Carga.

- Updating of the maintenance manual for UQE (four-car EMU) trains belonging to Fertagus.

H – Application of the common safety method on risk evaluation and assessment

In 2012, four significant processes of analysis of technical changes were concluded. These processes were subject to the application of Regulation (EC) No 352/2009 of the Commission, of 24 April 2009, regarding the adoption of a common safety method on risk determination and assessment. The four processes were:

- The modernisation of 45 carriages belonging to CP-Comboios de Portugal:
 - 31 second-class saloon carriages, series 20-74 001/031;
 - 3 first-class saloon carriages, series 10-74 001/003;
 - 11 first-class mixed saloon/bar carriages, series 85-74 101/111.
- Introduction into service of GSM-P communication equipment by REFER on the Vendas Novas – Casa Branca – Évora stretches of line.
- Remote control system on the LC at k.p. 74.552 of the Northern line.
- Movement of special vehicles on tracks that are open to operations.

The first three risk analyses relate to technical changes, and the last to technical and operational changes.

The undertakings were generally considered to have correctly applied Regulation No 352/2009, both in relation to the level of significance of the alterations, and as to the process of risk management, having made use of internal risk-assessment bodies for this purpose.

I – Conclusions

In terms of railway safety, notable occurrences in 2012 include the following:

I.1 - Positive points

The principal highlight is the lack of train derailments, as well as the absence, for the second consecutive year, of passenger or employee fatalities due to railway-related accidents.

Equally positive is the improvement in the indicators relative to technical safety of the infrastructure, especially the 17.4% reduction in the total number of level crossings relative to 2011.

Also positive is the fact that the undertakings have begun implementing Regulation No 352/2009/EC for risk analysis of certain significant changes.

For all the above reasons, 2012 cannot therefore be generally considered to have been a positive year in terms of improvements to safety, given the reversal of the steep decline in the accident rate, even though figures in this regard have remained below the average of the last eight years in all categories under analysis.

I.2 - Negative points

The accident rate increased in 2012 relative to 2011, with an increase in the number of accidents, fatalities, serious injuries, suicides and accident precursors.

On 2 May of this year a collision also took place between trains on the Cascais line, which did not result in fatalities but nevertheless did cause serious injuries amongst passengers, as well as spreading social unease. Collisions between trains represent a type of serious accident - fortunately rare - which had not occurred since 2004.

As a final point, we have to report the continuing occurrence of damage to the infrastructure, with an impact on safety and quality of service, due to thefts of electrical equipment and cables.

I.3 - Priority activities

The IMT, I.P. will prioritise the following railway safety measures in 2013/2014:

- Continue to support undertakings in developing their safety management systems by disseminating national and community legislation and the initiatives carried out by the ERA;
- Approve regulations that will govern the supervisory activities of the IMT, I.P.;
- Step up supervisory activities by conducting audits on the safety management systems used by the railway undertakings;
- Continue the activities involved in certifying safety management systems and authorising the use of new subsystems in such a way as to avoid restricting the normal activities of the railway undertakings.
- Continue with the analysis and approval of the technical safety regulations developed by the sector, which are needed to ensure the safe operation of present-day railway networks.
- Embark on the process of analysis and reduction of national safety regulations in accordance with the methodologies set by the European Railway Agency;
- Establish a forum for regular discussion of safety matters with rail transport undertakings and the infrastructure manager.

J – BIBLIOGRAPHY

- Guideline for the use of the template – Structure for the content of the NSA Annual Safety Report: ERA - Network of National Safety Authorities
- Guidance for use of CSI's recommendation - WG on Common Safety Indicators/Safety Performance
- Annual Safety Report 2012 – REFER
- Annual Safety Report 2012 – CP – COMBOIOS DE PORTUGAL
- Annual Safety Report 2012 – CP CARGA
- Annual Safety Report 2012 – FERTAGUS
- Annual Safety Report 2012 – TAKARGO
- Template - Structure for the content of the NSA Annual Report: ERA - Network of National Safety Authorities
- Data supplied by Statistics Portugal (INE - *Instituto Nacional de Estatística*) relative to the production indicators of undertakings and to GDP.

L - ANNEXES

ANNEX A – STRUCTURE OF THE RAILWAY SYSTEM

ANNEX B – ORGANISATION OF THE IMT, I.P.

ANNEX C – COMMON SAFETY INDICATORS AND DEFINITIONS USED

ANNEX D – RELEVANT AMENDMENTS TO LEGISLATION AND REGULATIONS

ANNEX E – DEVELOPMENT OF SAFETY CERTIFICATION AND AUTHORISATION

ANNEX F – SIGNIFICANT ACCIDENTS 2012

ANNEX G – ACCIDENT PRECURSORS 2012

ANNEX A -
STRUCTURE OF THE RAILWAY SYSTEM
2012

A.1 – Map of the National Rail Network



Rede Ferroviária Nacional com Tráfego Ferroviário

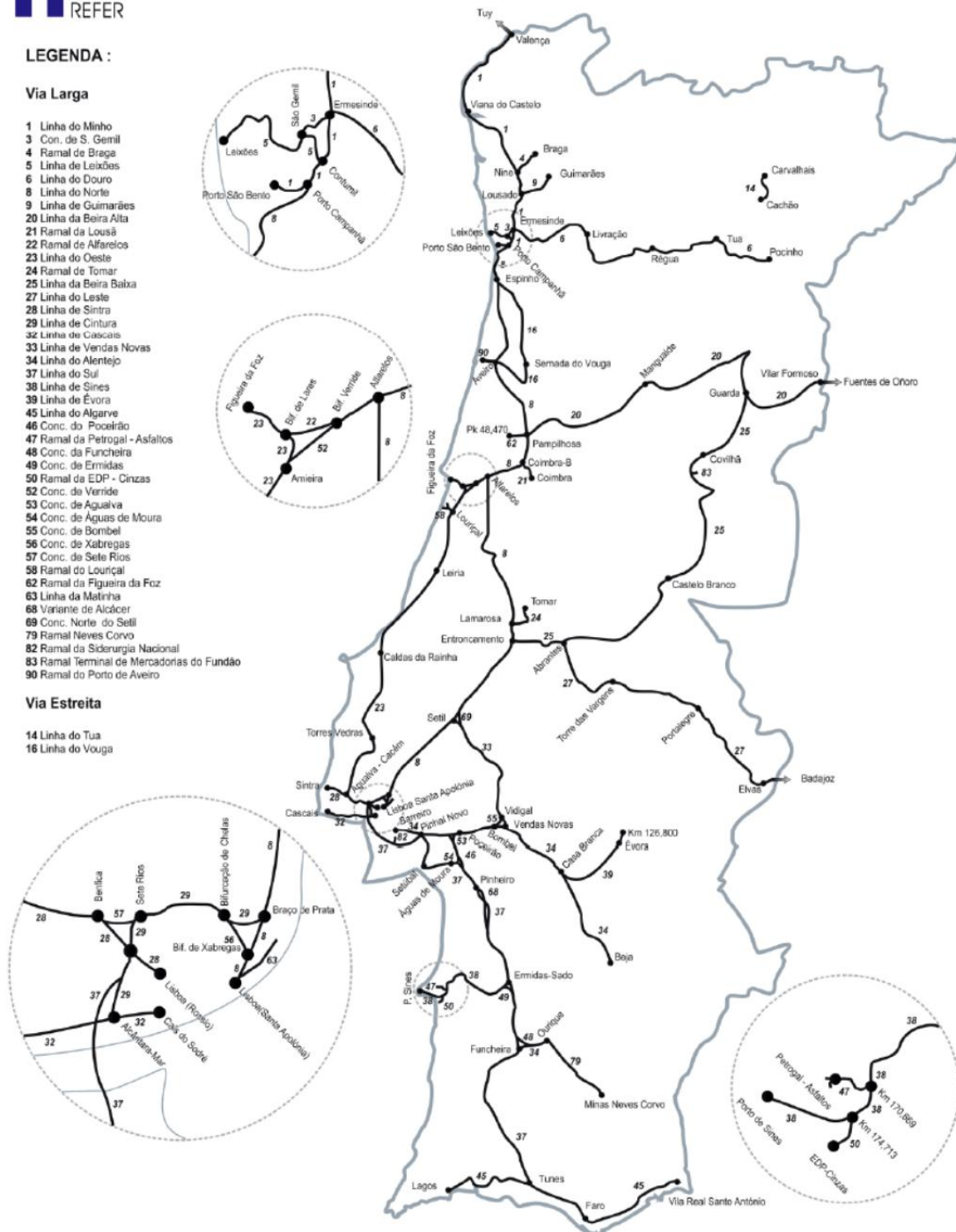
LEGENDA :

Via Larga

- 1 Linha do Minho
- 3 Con. de S. Geril
- 4 Ramal de Braga
- 5 Linha de Leixões
- 6 Linha do Douro
- 8 Linha do Norte
- 9 Linha de Guimarães
- 20 Linha da Beira Alta
- 21 Ramal da Lousã
- 22 Ramal de Alfaiões
- 23 Linha do Oeste
- 24 Ramal de Tomar
- 25 Linha da Beira Baixa
- 27 Linha do Leste
- 28 Linha de Sintra
- 29 Linha de Cintura
- 32 Linha de Cascais
- 33 Linha de Vendas Novas
- 34 Linha do Alentejo
- 37 Linha do Sul
- 38 Linha de Sines
- 39 Linha de Évora
- 45 Linha do Algarve
- 46 Conc. do Póvoa
- 47 Ramal da Petrógal - Asfaltos
- 48 Conc. da Funchela
- 49 Conc. de Ermidas
- 50 Ramal da EDP - Cinzas
- 52 Conc. de Verride
- 53 Conc. de Aguiar
- 54 Conc. de Águas de Moura
- 55 Conc. de Bombel
- 56 Conc. de Xabregas
- 57 Conc. de Sete Rios
- 58 Ramal do Louçã
- 62 Ramal da Figueira da Foz
- 63 Linha da Matinha
- 68 Variante de Alcôzer
- 69 Conc. Norte do Setil
- 79 Ramal Neves Corvo
- 82 Ramal da Siderurgia Nacional
- 83 Ramal Terminal de Mercadorias do Fundão
- 90 Ramal do Porto de Aveiro

Via Estreita

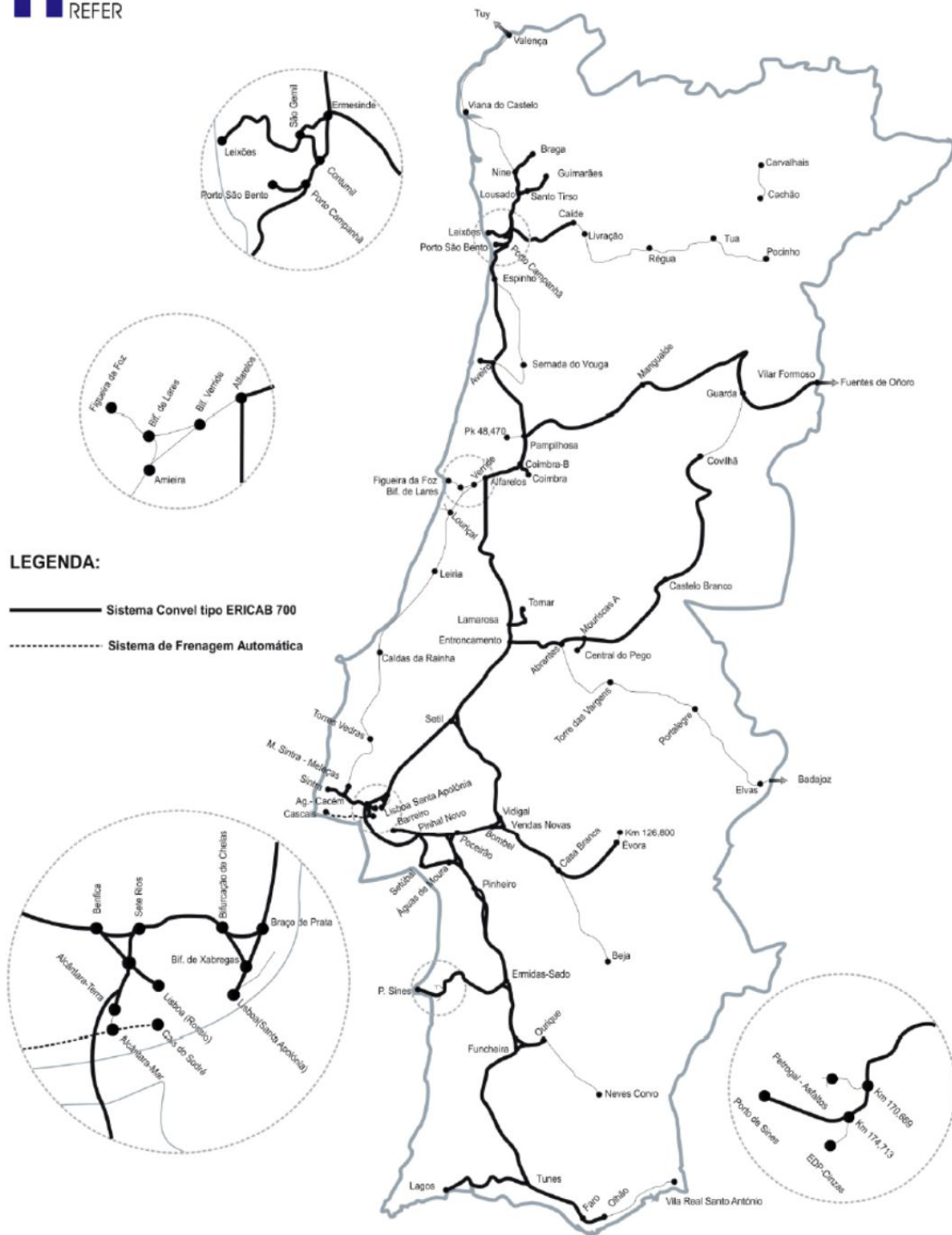
- 14 Linha do Tua
- 16 Linha do Vouga



A.1.1 – Map of Automatic Speed Control Systems



Sistemas de Controlo de Velocidade



A.2 – List of infrastructure management and rail transport undertakings

A.2.1 – Infrastructure manager

Description	Information
Name	REFER, Rede Ferroviária Nacional, E.P.
Address	Estação de Santa Apolónia, 1100-105 Lisbon, Portugal
Website	www.refer.pt
Safety Authorisation (DL No 270/2003, as amended by DL No231/2007 of 14 June)	PT 21 2012 0001 and PT 22 2012 0001
Date of commencement of activity	29 April 1997
Length of network open to traffic	Total: 2541.254 km Broad gauge track (1668 mm): 2428.944km Narrow gauge track (1000 mm): 112.310 km
Length of lines by number of tracks	Multiple-track: 610.333 km Single-track: 1930.921km
Length of electrified network	Total: 1630.098 km 25 000 V _{CA} : 1604.648 km 1 500 V _{cc} : 25.450 km % of network open to traffic: 64.15%
Length of lines equipped with CONVEL/ATP:	1638.583 km % of network open to traffic: 64.48%
Length of lines equipped with Ground-to-Train radio:	1506.102 km % of network open to traffic: 59.27%
Number of Level Crossings (including private and pedestrian)	877 LCs Density: 0.35 LCs/km of line 0.252 LCs/km of track
Level crossings with automatic or manual protection	435 LCs % of total LCs: 49.6%
Number of trains on network	Total: 601 888 Passenger: 480 954 Goods: 45 347 Empty stock movements: 75 587
Trains x km travelled on the network (train-km)	Total: 35.37 x 10 ⁶ Passengers: 28.57 x 10 ⁶ Goods: 5.75 x 10 ⁶ Empty stock movements: 1.05 x 10 ⁶
% of train-km with CONVEL/ATP in operation	88.91%

A.2.2 – Rail Transport Undertakings

A.2.2.1 – CP – Comboios de Portugal, E.P.E.

Description	Information
Name	CP – Comboios de Portugal, E.P.E.
Address	Calçada do Duque, n.º 20 1249-109 Lisbon Portugal
Website	www.cp.pt
Licence to begin activity (DL No 270/2003, as amended by DL No231/2007 of 14 June)	PT 01 2010 0001 – International passengers PT 01 2010 0002 – Domestic passengers PT 01 2010 0003 – Regional passengers PT 01 2010 0004 – Suburban passengers
Safety Certificate (DL No 270/2003, as amended by DL No231/2007 of 14 June)	PT 11 2011 0002 and PT 12 2011 0004
Date of commencement of activity	09 May 1951
Traffic type	Passengers
Number of locomotives	Total: 89 (Diesel: 37; Electric: 52)
Number of motor coaches	Total: 236 (Diesel: 49; Electric: 187)
Number of carriages	102
Number of drivers	767
Number of assistant drivers	2
Number of commercial operators with safety-related responsibilities	616
Number of trains used	Passengers: 430 545 (including empty movements)
Trains x km travelled (train-km)	Passengers: 28.00 x 10 ⁶ (including empty movements)
% of train-km travelled with CONVEL/ATP in operation on the train	99.9%
Number of passengers x km (pk)	3 443 x 10 ⁶
Number of hours worked on undertaking business	5 225 154

A.2.2.2 – FERTAGUS, S.A.

Description	Information
Name	FERTAGUS, Travessia do Tejo, Transportes, S.A.
Address	Estação do Pragal Porta 23 2805-333 Almada Portugal
Website	www.fertagus.pt
Licence to begin activity (DL No 270/2003, as amended by DL No231/2007 of 14 June)	PT 01 2011 0001
Safety Certificate (DL No 270/2003 of 28 October)	PT 11 2011 0003 and PT 2011 0005
Date of commencement of activity	29 July 1999
Traffic type	Passengers
Number of rail coaches	Electric: 18
Number of drivers	46
Number of assistant drivers	N/a
Number of commercial operators with safety-related responsibilities	83
Number of trains used	Passengers: 56 098 (including empty movements)
Trains x km travelled (train-km)	Passengers: 1.791×10^6
Number of passenger km (pk)	359.207×10^6
% of train-km with CONVEL/ATP in operation	100%
Number of hours worked on undertaking business	324 407

A.2.2.3 – TAKARGO, Transporte de Mercadorias, S.A.

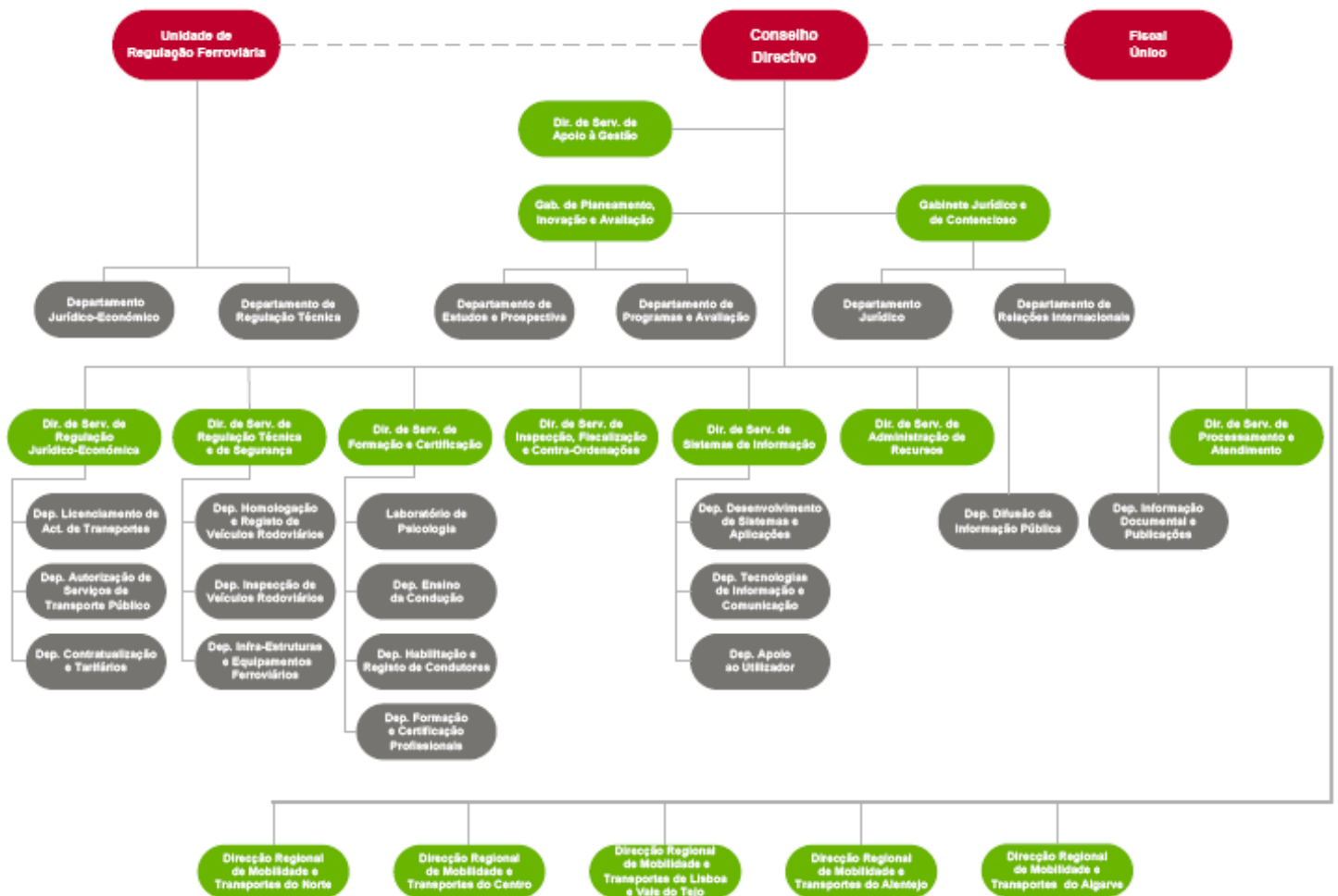
Description	Information
Name	TAKARGO, Transporte de Mercadorias, S.A.
Address	Rua Mário Dionísio, nº 2 2799 – 557 Linda-a-Velha Portugal
Website	Not available
Licence to begin activity (DL No 270/2003, as amended by DL No231/2007 of 14 June)	Licence No 02 of 01 March 2007
Safety Certificate (DL No 270/2003, as amended by DL No231/2007 of 14 June)	Part A - PT 11 2008 0001 (1st issue) Part B - PT 12 2008 0001 (1st issue)
Date of commencement of activity	25 September 2008
Traffic type	Goods
Number of Locomotives	Diesel: 11
Number of wagons	125
Number of drivers	26
Number of assistant drivers	7
Number of trains used	Goods: 2747 (includes empty stock movements)
Trains x km travelled (train-km)	Goods: 0.65×10^6
Number of tonne-km	287.62×10^6
% of train-km with CONVEL/ATP in operation	84%
Number of hours worked on undertaking business	105 924

A.2.2.4 – CP Carga – Logística e Transporte Ferroviário de Mercadorias S.A.

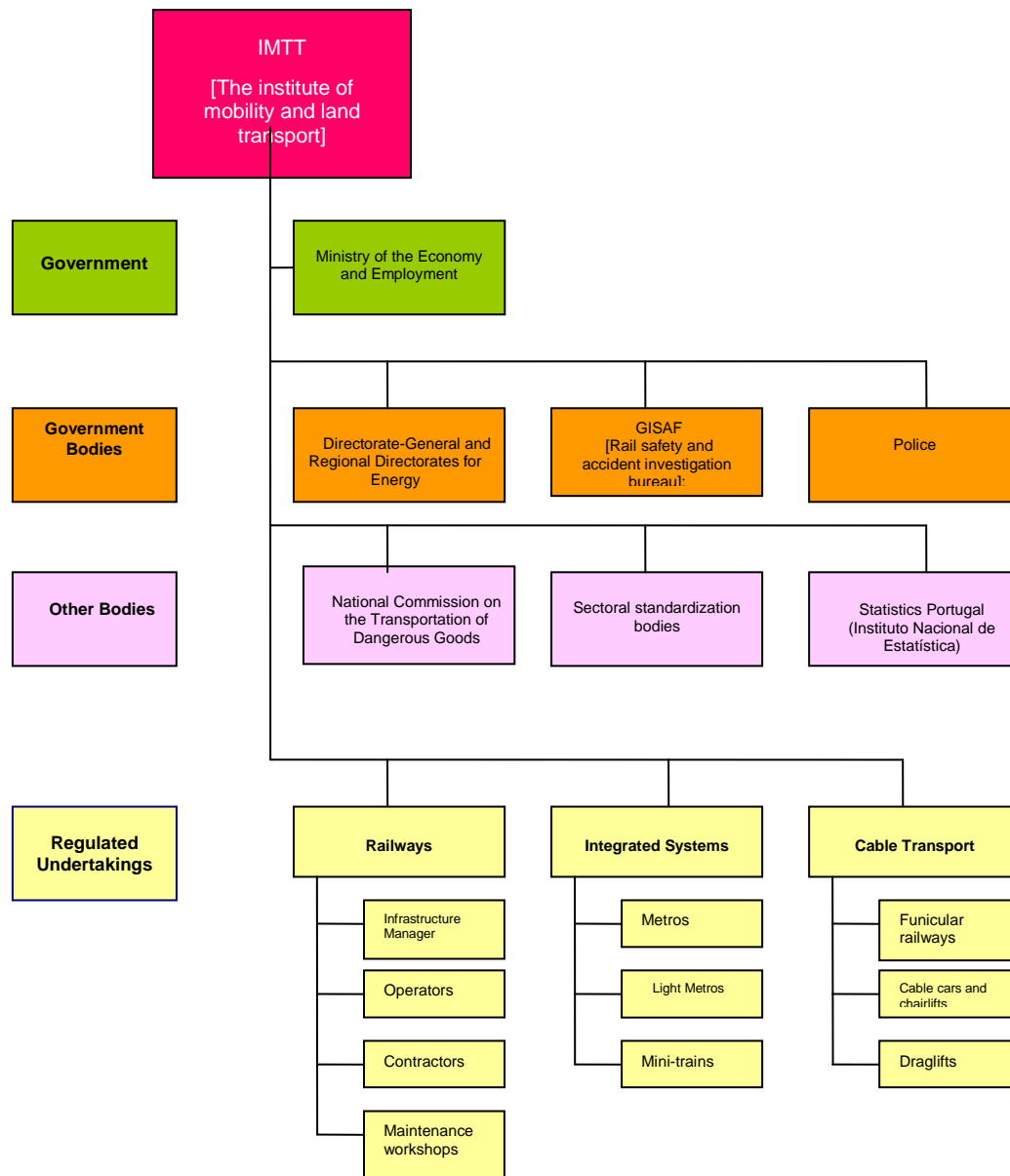
Description	Information
Name	CP Carga – Logística e Transporte Ferroviário de Mercadorias S.A.
Address	Calçada do Duque, n.º 20 1249-110 Lisbon Portugal
Website	www.cpcarga.pt
Licence to begin activity (DL No 270/2003, as amended by DL No231/2007 of 14 June)	PT 01 2009 01 – Domestic freight PT 01 2009 02 – International freight
Safety Certificate (DL No 270/2003, as amended by DL No231/2007 of 14 June)	Part A – PT 11 2010 0001 Part B – PT 12 2010 0004
Date of commencement of activity	01 August 2009
Traffic type	Goods
Number of Locomotives	Total: 50 (Diesel: 16; Electric: 34)
Number of Wagons	2829
Number of drivers	266 (average)
Number of assistant drivers	- n/a
Number of trains used	Goods: 45 992 (including empty movements)
Trains x km travelled (train-km)	Goods: 5.25 x 10 ⁶
% of train-km travelled with CONVEL/ATP in operation on train	99.05%
Number of tonne-km	2 025 x 10 ⁶
Number of hours worked on enterprise business	1 160 587

ANNEX B -
ORGANIZATION OF THE IMT, I.P.
2012

B.1 – Organisational chart of the IMT, I.P.



B.2 – Relationship of the IMT, I.P. with other rail safety bodies



**ANNEX C -
COMMON SAFETY INDICATORS AND
DEFINITIONS USED**

2012

C.1 – Common Safety Indicators 2012

Number of accidents and breakdown by type		Per million train-km
Total number of accidents	36	0.96
Train collisions, including collisions with obstacles within the clearance gauge	1	0.03
Train derailments	0	0
Accidents at level crossings, including those involving pedestrians	11	0.29
Accidents to persons caused by rolling stock in motion, excluding suicides	23	0.61
Fires on rolling stock	0	0
Other accidents	1	0.03

Total number of presumed suicides	Per million train-km
Suicides	58

Number of fatalities and breakdown by category of person		Per million train-km	Per million pk
Total number of fatalities	24	0.64	
Passengers	0	0	0
Employees (including the staff of contractors)	0	0	
LC users	8	0.21	
Unauthorised persons on railway property	16	0.43	
Others	0	0	

Number of fatalities and breakdown by type of accident		Per million train-km
Total number of fatalities	24	0.64
Train collisions	0	0
Train derailments	0	0
Accidents at level crossings, including those involving pedestrians	8	0.21
Accidents to persons caused by rolling stock in motion, excluding suicides	16	0.43
Fires on rolling stock	0	0
Other accidents	0	0

Number of serious injuries and breakdown by type of casualty		Per million train-km	Per million pk
Total number of serious injuries	16	0.43	
Passengers	3	0.08	0.00079
Employees (including the staff of contractors)	0	0	
LC users	5	0.13	
Unauthorised persons on railway property	7	0.19	
Others	1	0.03	

Number of serious injuries and breakdown by type of accident		Per million train-km
Total number of serious injuries	16	0.43
Train collisions, including collisions with obstacles within the clearance gauge	2	0.05
Train derailments	0	0
Accidents at level crossings, including those involving pedestrians	5	0.13
Accidents to persons caused by rolling stock in motion, excluding suicides	9	0.24
Fires on rolling stock	0	0
Other accidents	0	0

Number of incidents and near-misses and breakdown by type		Per million train-km
Total number of incidents and near misses	146	3.89
Broken rails	45	1.2
Buckles on track	76	2.03
Wrong-side signalling failures	0	0
Signals passed at danger	25	0.67
Broken wheels on rolling stock in operation	0	0
Faulty axles on rolling stock in operation	0	0

Cost of accidents (million Euros)		Per million train-km
Total cost	24.96	0.67
Cost of fatalities	22.27	0.59
Cost of injuries	1.99	0.05
Cost of replacing or repairing damaged rolling stock and infrastructure	0.24	0.01
Cost of delays, disruptions and re-routing of traffic, including expenditure on additional personnel and loss of profits	0.46	0.01

Indicators relating to technical safety of infrastructure	
% lines with Automatic Train Protection (ATP) in operation	52.6%
% of train-kilometres travelled using operational ATP systems	89.1%
No of level crossings (LCs)	
Active LCs - Warning and/or automatic protection of users	
Automatic warning of users	35
Automated user protection	0
Automatic warning and automatic user protection (simultaneous)	347
Automatic warning and automatic protection of users and automatic train protection	0
Active LCs – Manual control with warning and/or protection of users	
Manual warning of users	2
Manual protection of users	60
Manual warning and protection of users (simultaneous)	13
Total active level crossings	457
Total passive level crossings	592
Total LCs (Active + Passive)	1049
Number of LCs per kilometre of track	0.30
Number of LCs per kilometre of line	0.38
% of level crossings with automatic or manual protection	43.6%

Reference data	
No of trains x km (in million train-km)	37.21
No of passengers x km (in million pk)	4143.4
No of km of track (km of multiple lines x No of tracks)	3482.674
No of km of line in operation	2793.92

N.B: figures from Statistics Portugal (INE)

Table C.1.1 – Summary of Common Safety Indicators

C.2 – Definitions used

The definitions used in the Common Safety Indicators and the common method for calculating the economic impact of the cost of accidents can be found in Decree-Law 62/2010 of 9 June, transposing Directive 2009/149/EC of 27 November into national law.

ANNEX D -

RELEVANT AMENDMENTS TO LEGISLATION AND

REGULATIONS

2012

National legislation	Legal reference	Date of entry into force	Reason for introduction	Description
Generic national safety legislation	Decree-Law No 182/2012	06/08/2012	Transposition of Community Directive	Transposes Directive 2011/18/EU, which amends Annexes II, V and VI of Directive 2008/57/EC, relative to interoperability of the Community rail system, being the first amendment to Decree-Law No 27/2011, of 17 February.
	Decree-Law No 206-A/2012	31/08/2012	Transposition of Community Directive	The first amendment to Decree-Law No 41-A/2010, dealing with the inland transport of dangerous goods, transposing Directive 2010/61/EU of the European Commission, and ensuring that the regime of certification relative to training entities for safety advisors and drivers of vehicles carrying dangerous goods agrees with Decree-Law No 92/2010, of 26 July.
Legislation relative to the national safety authority	-	-	-	-
Legislation on bodies notified, assessors, third parties for registration, investigations, etc.	-	-	-	-
National Railway Safety Rules				
Rules on national safety methods and objectives	-	-	-	-
Rules laying down requirements for safety management systems and safety certification of railway transport undertakings	-	-	-	-
Rules laying down requirements for safety management systems and safety authorisation of the Infrastructure manager	-	-	-	-
Rules laying down requirements for owners of rolling stock	-	-	-	-

Rules laying down requirements for wagon maintenance workshops	-	-	-	-
Rules laying down requirements for authorisation to put rolling stock or modified stock into service and maintenance.	-	-	-	-
General rules for traffic movement on the rail network, including rules on signalling and traffic movement procedures	<ul style="list-style-type: none"> • 29th amendment to the IG7 – Staff levels on trains • 46th amendment to the RGS II – Signals • 1st amendment to RGS XII – Prohibited routes • 3rd amendment to IET 77 – Safety standards and procedures when working on infrastructure 	<p>14/05/2012</p> <p>29/01/2012</p> <p>16/09/2012</p> <p>03/09/2012</p>	<p>To improve operating efficiency</p> <p>To improve safety and operating conditions</p> <p>To improve safety and operating conditions</p> <p>To improve safety conditions when working on infrastructure</p>	<p>Set the conditions for the running of goods trains without the need for an assistant driver</p> <p>Introduction of a signal with a “Conditional Warning” aspect – indicating the presence of CONVEL balises without permanent stop information</p> <p>Amendments reinforcing conditions relative to traffic movement on prohibited routes.</p> <p>Establishment of a new telegram form for improvement to working safety conditions.</p>
Rules laying down requirements for internal operating rules (company rules) to be established by the infrastructure manager and operators.	-	-	-	-
Rules relating to requirements for staff carrying out safety-related activities, including selection criteria, physical aptitude and vocational training and certification	-	-	-	-
Rules on the investigation of accidents and incidents, including recommendations	-	-	-	-
Rules laying down requirements for national safety indicators, including instructions on their collection and analysis	-	-	-	-

ANNEX E –
DEVELOPMENT OF SAFETY CERTIFICATION AND
AUTHORIZATION
2012

E.1 – Safety certificates as per Directive 2004/49/EC

Table E.1.1		New	Amended/Revised	Renewed
No of Safety Certificates – Part A issued in 2012 to:	Undertakings licensed in Portugal	-	-	-
	Undertakings licensed in another Member State	-	-	-

Table E.1.2		New	Amended/Revised	Renewed
No of Safety Certificates – Part B issued in 2012 to:	Undertakings licensed in Portugal	-	3	-
	Undertakings licensed in another Member State	-	-	-

Table E.1.3			Accepted*	Rejected*	Pending*
Number of applications for safety certificates - Part A submitted in 2012 by:	Undertakings licensed in Portugal	New Certificates	-	-	-
		Amendment/Revision of Certificates	-	-	-
		Renewal of Certificates	-	-	-
	Undertakings licensed in another Member State	New Certificates	-	-	-
		Amendment/Revision of Certificates	-	-	-
		Renewal of Certificates	-	-	-

Table E.1.4			Accepted*	Rejected*	Pending*
Number of applications for safety certificates - Part B submitted in 2012 by:	Undertakings licensed in Portugal	New Certificates	-	-	-
		Amendment/Revision of Certificates	3	-	-
		Renewal of Certificates	-	-	-
	Undertakings licensed in another Member State	New Certificates	-	-	-
		Amendment/Revision of Certificates	-	-	-
		Renewal of Certificates	-	-	-

N.B: (*) – Accepted: application accepted and certificate issued
 Rejected: application rejected and certificate not issued
 Pending: application being examined, certificate not yet issued

E.2.5 – List of countries in which undertakings applying for safety certificate - Part B obtained safety certificate - Part A:

- Portugal

E.3 – Safety Authorisation as per Directive 2004/49/EC

Table E.3.1	New	Amended/Revised	Renewed
No of safety authorisations issued in 2012 to infrastructure management undertakings	-	-	-
	-	-	-

Table E.3.2		Accepted*	Rejected*	Pending*
No of safety authorisation applications submitted in 2012 by infrastructure management undertakings	New authorisations	-	-	-
	Amendment/Revision of authorisations	-	-	-
	Renewal of authorisations	-	-	-

N.B: (*) – Accepted: application accepted and certificate issued
 Rejected: application rejected and certificate not issued
 Pending: application being examined, certificate not yet issued

E.4 – Safety certificates – Part A: Procedures

		New	Amended/Revised	Renewed
Average time (in 2012) for issuing a safety certificate – Part A, after receipt of all necessary documentation	Undertakings licensed in Portugal	-	-	-
	Undertakings licensed in another Member State	-	-	-

E.5 – Safety Certificates – Part B: Procedures

		New	Amended/Revised	Renewed
Average time (in 2012) for issuing a safety certificate – Part B, after receipt of all necessary documentation	Undertakings licensed in Portugal	-	1 week	-
	Undertakings licensed in another Member State	-	-	-

E.6 – Safety Authorisation: Procedures

	New	Amended/Revised	Renewed
Average time (in 2012) for issuing a Safety authorisation, after receipt of all necessary documentation	-	-	-

**ANNEX F –
SIGNIFICANT ACCIDENTS
2012**

Significant Accidents 2012

DATE	TRAIN	LINE	TYPE	DESCRIPTION
09/01/2012	5900	ALGARVE LINE	COLLISIONS - OPEN TRACK	The train indicated was in a fatal collision with a man who had been crossing the track at an improper location. There is an underpass at the site in question. The body was left on the trackside. A category C emergency plan was instigated. The train remained at the site from 08:58 to 10:15, due to enquiries carried out by the authorities. The track manager was appointed local emergency manager. The body was removed at 10:15, leaving the track free of any restriction. Train 670/1 awaited the arrival of a taxi, at the request of CAT.
15/01/2012	5715	ALGARVE LINE	COLLISIONS - Cat. B LC	A woman was hit by the listed train at an automatic, type B LC, which was working normally. The victim was on the right-hand-side to the direction of travel, and had intended to run across the track. The victim's body was thrown off the track by the force of the collision. Death was confirmed at the scene by the emergency ambulance service (INEM). The train remained at the site from 14:56 to 15:38. The PI, PCC and CAT were notified. Train 5719 was running, stopping at the site as a precautionary measure. Traffic was suspended between 16:41 and 16:45 for removal of the body. Normal operating conditions were then resumed.
27/01/2012	15746	NORTHERN LINE	COLLISIONS - OPEN TRACK	The train stopped when leaving the halt/alighting point at Miramar, after hitting a pedestrian who was walking along the down line, who was seriously injured. The situation was dealt with by the National Republican Guard (GNR) of Arcozelo, the Aguda and Gaia fire service and the emergency ambulance service (INEM), who took the victim to hospital at Vila Nova de Gaia. A category C emergency plan was set in motion, and a local emergency manager was appointed. On 09/02/2012 the casualty was still receiving in-patient treatment at Gaia hospital.
	522	NORTHERN LINE	FALLS ON ALIGHTING	Passenger fall in Gaia >24 hours
13/02/2012	4411	NORTHERN LINE	COLLISIONS - STATION	This OCC (operational command centre) was informed that the listed train had collided with a man, who was killed instantly. A category C emergency was declared, and the Traffic Inspector was appointed as local emergency manager. Traffic was immediately suspended on the VAR track between Sacavém-Bobadela-Sul and Alverca. Permission for the body to be removed was given by the authorities at 11:12. Train 4411 started running at 12:02. The track was released to train traffic free of restrictions at 12:08. The person involved had been trying to cross line 1 without using the stairs.

11/03/2012	5705	ALGARVE LINE	COLLISION - type D LC	Train 5705 hit a registered vehicle at the type D level crossing at k.p. 382.924. The car arrived to the left of the train's direction of travel and had stopped in the middle of the track. The dual diesel unit received damage to the compressed air hoses, a CONVEL antenna, horns and other damage to be noted on the MY vehicle. LCs at k.p. 382.266 and 383.566 went into warning mode, as the table and protection of detector D50 on the post at the level crossing at 382.266 had been damaged. Connection cables to that same detector were also damaged. The PI and PCC were notified. Help was requested from the rear, at 12:15, emergency form No 21333. Implemented operation 97201 leaving Tavira- 13:10 and arriving at k.p. 383.500 at 13:35. As informed by the train driver, the train would only be able to go back as far as the station at Tavira. Due to technical difficulties relative to traction, removal to the station at Tavira only began at 15:35, where it arrived at 16:20. Normal circulation of trains with no restrictions was re-established at 16:20. The infrastructure manager was appointed local emergency manager. A category C emergency was established.
19/03/2012	16540	NORTHERN LINE	COLLISIONS - STATION	The driver of train 16540 stated that he had struck a glancing blow to a man who was trying to jump onto the platform. This led the man to sustain multiple injuries, and he was taken to the city hospital. The Reynaldo dos Santos hospital in Vila Franca da Xira, contacted on 03/04/2012 at 16:25, stated that the victim was at that time still receiving in-patient treatment at the hospital. For this reason it was considered to be a serious injury and consequently a significant accident.
01/04/2012	6410	SINTRA LINE	COLLISIONS - STATION	The ticket collector stated that on entering line 3, a man who had been trying to climb up to the platform on line 3, having come from line 2, had been hit. The train stopped at the station and the man remained unconscious at about 70 metres from the rear of the train. The ticket collector requested help from the emergency ambulance service (INEM) and the Lisbon operational command centre (CCO) called the PSP/CP police of Monte Abraão, who went to the site of the accident, and who gave permission for the train to resume its journey at 23:49. In order to assist the man, traffic movement was stopped on the internal down line between Monte Abraão and Amadora/ line No 3 of Amadora until 00:10. The PSP/ CP police released the line at 00:10, at which time train services were restarted. The man was taken, still alive, to Amadora/ Sintra hospital. Resolved.
04/04/2012	17241	SOUTHERN LINE	COLLISIONS - Cat. X LCs (pedestrians only)	The driver of train 17241 stated that he hit a man at the pedestrian LC at k.p. 29.200, on the right to the direction of travel. After stopping the train, the ticket inspector went to the site of the collision and confirmed that there was a person dead between the rails. The emergency ambulance service (INEM) and the PSP police at Setúbal were informed, and the traffic inspector was appointed local emergency manager (category C emergency). Once the health officer had arrived, the body was removed at 18:45. Track cleaning was carried out using Pate No 37 with power shut-down and track prohibition between Setúbal and Praias Sado, between 18:52 and 19:03. Normal service was restored at 19:04.

09/04/2012	15621	NORTHERN LINE	COLLISIONS - Cat. X LCs (pedestrians only)	Train stopped due to having hit a man who was on the crossing at the moment when train 522 was passing. The victim was killed instantly and according to the driver was crossing from the side of the up-line to the side of the down-line. An emergency level C plan was initiated. The Porto branch of the civil protection authority (CDOS) was informed, and they in turn informed the other entities. The supervisor of Movement Zone 102 came to the accident site and took on the duties of local emergency manager. Circulation was re-established on the up line at 11:30 and on the down line at 11:45, with traffic proceeding on sight between km 325.350 and 325.450. Normal movement with no restrictions was authorised starting at 11:56, after removal of the body by the Gaia fire brigade.
17/04/2012	871	DOURO LINE	COLLISION - Cat. P (Private) LC	Train stopped at the stated km (private LC), as it had hit a 9-seater vehicle. The injured were taken to Vila Real hospital by the fire brigade of S. João da Pesqueira. The vehicle could not be got free of the site; a private tractor was needed to remove it from the location. A police officer who was on the train monitored the work. Traffic resumed without restriction at 18:22. On 05/07/2012 the local emergency manager confirmed that the victims had been treated as hospital in-patients for more than 24 hours.
24/04/2012	181	SOUTHERN LINE	COLLISIONS - Cat. C LC	The train driver stated that on passing through the automatic type B level crossing at k.p. 273.459, there was a man fallen down next to the track who had presumably been hit by the train. This situation that was later confirmed by the ticket collector, who stated that the man when found had already died. Notified: the infrastructure office, Inspectorate of the Central Command Post (PCC), the ROS engineer, and the AP-CLC of CP. The infrastructure supervisor was appointed local emergency manager. Train movement was restarted, with restrictions at the site, at 12:05. Normal train traffic was restarted at 12:38. On 27/04, the National Republican Guard (GNR) at Messines and the Albufeira traffic police (BT), who had been present at the site, were contacted. They confirmed that the man must have not taken enough care, and that the collision with the train must have been accidental after he had fallen at the crossing point of the level crossing, which presumably would have been closed (LC).
02/05/2012	19252	CASCAIS LINE	COLLISIONS - STATION	Train 19252 hit a man at the Paço de Arcos halt/alighting point. The man was killed instantly. According to the train driver, the man in question had tried to cross the track to the other platform, freezing in place when he saw the train approaching. The body was removed at 14:45, and the down line was declared clear. The... was appointed as local emergency manager. Category C emergency.
02/05/2012	19253	CASCAIS LINE	COLLISION - STATION	The service centre of CP LX stated that there had been a crash at Caxias station involving train 19253 (MYs 3256 + 3159) at the rear of train 19653 (MYs 3269 +3154). Traffic was suspended on the up line between Algés and Caxias, and at 15:30 a single track was set up on the down line between the two stations. The collision resulted in injury to around 31 passengers, some of whom were taken to hospital by the emergency ambulance service (INEM). A category B emergency plan was activated, and the inspector was appointed local emergency manager. A team from EMEF carried out temporary repairs to the trains at the site. The trains were then taken in two special journeys to the workshops at Carcavelos. Work was carried out to repair the track, which was declared open to

				normal train circulation at 17:35. Two of the injured passengers had to stay in hospital for longer than 24 hours.
07/05/2012	5726	ALGARVE LINE	COLLISIONS - OPEN TRACK	At the stated k.p., the train collided with a man who was walking next to the track. The man was thrown onto the trackside. The train waited for the arrival of the emergency ambulance service (INEM) and for the National Republican Guard (GNR) from Vila Real de Santo António, who took charge of the situation. The train continued onwards at 21:56. The infrastructure office was notified. Category C emergency. The track infrastructure manager was appointed local emergency manager. The body was removed at 00:35.
22/05/2012	SERVICE TRAIN REFER	EASTERN LINE	COLLISION - Cat. B LC	This operational command centre (CCO) was informed by the inspector that a railway inspection trolley that had set off from Abrantes station, a service vehicle that was on duty when service order (S.O.) No 1608 was in force (prohibited track between Abrantes and Elvas), collided, at an LC at the k.p. indicated, with a Citroen car which came from the left-side to the direction of travel of the railway inspection trolley. The National Republican Guard (GNR) and the fire brigade from Abrantes took charge of the situation. The accident resulted in 2 minor injuries, one serious injury and one fatality, all from amongst the occupants of the car. A category C emergency was declared, and the inspector was appointed local emergency manager. There was no damage to the level crossing. The injured were taken to Abrantes hospital. Operations to release the damaged car began at 12:45. The railway inspection trolley was released at 13:00. The track at the site of the accident was declared clear at 13:05. The railway inspection trolley returned to Abrantes station at 13:13.
08/06/2012	19254	CASCAIS LINE	COLLISIONS - STATION	At the time stated, this operational command centre (CCO) was informed by the CP service centre at Cais do Sodré, that train 19254 had hit a man who was crossing the track at the indicated halt/alighting point. The man was killed instantly. Train movement was suspended on the down line between Oeiras and Alcantara-Mar from 14:07. The emergency ambulance service (INEM) was called to the site. An emergency plan C was put into motion and the traffic inspector was appointed local emergency manager. The body was moved onto the platform, with the track open to circulation at 15:22, and then transported to the institute of legal medicine (IML) at 15:30. According to information from CP, the victim had earphones in his ears and would not have noticed the arrival of the train.
04/07/2012	16405	NORTHERN LINE	COLLISIONS - Cat. A LC	A woman was hit by train 16405, on the right of the train in the direction of travel, when crossing the level crossing indicated. She was on the down line and was killed instantly. Death was declared by the CODU emergency triage doctor. The body was removed at 8:30 and taken to the morgue at Vila Franca de Xira hospital at 8:36 by the local voluntary fire brigade. The PSP/CP police from Gil and the PSP police from Vila Franca de Xira took charge of the situation. The inspector was appointed local emergency manager. A category C emergency was declared. A single track was established on the up line between Castanheira do Ribatejo and Alhandra at 08:08, after the train in question had started up again and arrived at C. Ribatejo. The down line was released to traffic at 08:30. On 30/07/2012 the inspector confirmed that the victim had not been paying attention.

16/08/2012	16524	NORTHERN LINE	COLLISIONS - Cat. B LC	<p>Stated having hit a person on the LC at the indicated k.p., with the injured person occupying both tracks. The fire brigade and the emergency ambulance service (INEM) were called, and they came to the site to aid the victim. Movement was halted on the down and down lines between Alhandra and Castanheira from 12:40 to 13:14. The injured person was taken by the emergency ambulance service (INEM) to the local hospital. The victim was then transferred from S. José hospital to Vila Franca de Xira hospital on 20/08, and was still an in-patient at that hospital on 05/09/2012.</p>
04/09/2012	55984	NEVES CORVO BRANCH LINE	COLLISION - type D LC	<p>The train stopped as it had hit a farm tractor at the type D level crossing at k.p. 22.317. The information received from the support operator is that the tractor driver is now dead. The National Republican Guard (GNR) of Castro Verde took charge of the case. The body was removed at 19:00 by the Castro Verde voluntary fire brigade. The tractor was removed from the track at 20:30, at which time help was requested from the front, as the locomotive was not fit to pull the train. Locomotive 1905 from train 69891/0 was sent, leaving its set of coaches in Ourique and arriving at the site at 21:50. They set off from the site at 22:12. There was damage to the track.</p>
30/09/2012	134	NORTHERN LINE	COLLISIONS - STATION	<p>Stated that a person who was crossing at the station crossing point was hit. The person was thrown onto the platform, on the down line side. Train movement was stopped on the down line, with trains proceeding on sight on the up line. The emergency ambulance service (INEM) and the National Republican Guard (GNR) at the territorial command post of Torres Novas were both alerted. A category C emergency plan was activated, and the inspector was appointed local emergency manager. A request was made for trains to be stopped on the up line between 21:15 and 21:24 in order to allow crossing of the track. The victim was taken by the emergency ambulance service (INEM) to hospital, with serious injuries. The line was opened to traffic without restrictions at 21:30.</p>
07/10/2012	541	NORTHERN LINE	COLLISIONS - STATION	<p>The train made a stop at the indicated k.p. due to having hit a woman who had been climbing up to the boarding platform on the up line at the Santana - Cartaxo halt/alighting point. The woman was killed instantly. The train service was suspended on the up line between Setil and Resguardo de Santana Cartaxo, with single-track circulation taking place on the down line, with pure automatic block signalling in both directions between these stations, and traffic proceeding on sight at the location in question. This situation was only activated after confirmation by the ticket collector that the down line was free for operation. An inspector went to the site to take on the role of local emergency manager in this category C emergency plan. A power shut-down was requested at Entroncamento station in order to wash down traction unit 2296. This took place between 10:25 and 10:35. The health officer and ambulance car for collection of the victim arrived at the scene at 11:32. The body was removed at 12:12, with the remaining time spent on cleaning and inspection of the track.</p>

12/10/2012	5211	VOUGA LINE	COLLISIONS - OPEN TRACK	The train stopped at the k.p. indicated due to having struck a woman, who was walking along the track, with a glancing blow. Apparently the woman suffered only slight injury, and was taken by the Albergaria voluntary fire brigade to Aveiro hospital. The victim was released from hospital on 19-10-2012.
17/10/2012	530	NORTHERN LINE	COLLISIONS - OPEN TRACK	The driver of train 80834, on passing the aforementioned halt/alighting point, stated that he saw a shape on the track which he could not identify. Attempts were made to contact the driver of train 4438, but this was not possible as he was not registered on the Ground-to Train radio, and when contact was achieved via the driver's mobile phone he had already passed the spot, and confirmed that there was indeed a shape between the station and the rail. After being informed of the situation, the driver of train 514 stopped at the site and confirmed that there was a body on the track, remaining there until further notice. Train movement was suspended on the down line between the stations of Setil and Azambuja from 22:47 until further notice. Passengers were transferred from train 514 to train 136 at Virtudes halt/alighting point. Local emergency managers were appointed. A category C emergency plan was established. Circulation of trains was suspended on the up line at 00:20 at the request of the inspector, so that the body could be removed. Circulation of trains recommenced on the up line at 01:00. The central command post (PCC) asked CP LC to check over trains 544 and 530, with remains being found on the 2nd carriage of train 530 (locomotive 5601). The driver of train 530 stated that he had not noticed anything when passing through the site of the accident. The body was removed at 01:22, with circulation of trains recommencing at the same time, and no restrictions at the site. Service orders (O.S.) 3184, 3173 and 3187 started late due to this incident.
28/10/2012	15166	MINHO LINE	COLLISIONS - OPEN TRACK	On passing k.p. 4.112, a man, who had apparently fallen down, appeared from the top of a wall contiguous to the down line and was hit by the left side of the train. He was killed instantly. Temporary circulation was achieved in both directions via the up line, with trains proceeding on sight between k.p. 4.100 and 4.200. Local emergency management was taken on by Engineer Paulo Rocha. The body was removed at 17:50, with the track being declared open without restrictions. The train driver was psychologically affected. He was assisted by the emergency ambulance service (INEM) medical team, who were at the scene, and was replaced by another driver.
13/11/2012	15700	NORTH	COLLISION	The train stopped at the indicated k.p. as it had hit a pedestrian who was walking along the line. The victim was a man of about 40. The body remained on the down-line trackside. Traffic was moving using this track alone. According to the driver, the person was going from Espinho to Granja, and was therefore facing the train. The civil protection authority (CDOS) was informed. Service order No 3561 - closure of the down line between Granja and Ovar - was prepared in order to send out train 3400. Train 3400 proceeded on sight between k.p. 318250 and 317750. A category C emergency plan was put into effect, and a local emergency manager appointed. The body was removed at 02:40, at which point normal service resumed.

16/11/2012	----	SINTRA	COLLISION	The train driver reported that a person had fallen between the tracks at the indicated k.p., next to signal S/1. Traffic was immediately suspended on both tracks. The emergency ambulance service (INEM) was called, and a category C emergency was determined. The specialist was appointed as local emergency manager. In order to stabilise the injured person, the emergency vehicle belonging to INEM and an ambulance were allowed to enter the tunnel, with a power shut-down taking place between 17:02 and 17:33. When the injured party had been removed, the line was given the all clear at 17:35. Later on the police (PSP) were told by a witness that the person in question had been hanging on to the step-board leading up to the intermediate drivers cabin, having then collided against signal S/1, causing damage to the signal. In order to repair and stabilise signal S/1, traffic movement on the up line was suspended between 18:21 and 19:48.
22/11/2012	543	BEIRA BAIXA	COLLISION	Stated that, at the indicated k.p., the train side-struck a woman who was walking beside the track. The emergency ambulance service (INEM) was called, who provided assistance at the site, taking the victim to Castelo Branco hospital. It was established that the injured party spent more than 24 hours in hospital.
23/11/2012	19650	CASCAIS	Falls when embarking/a lighting	The train driver stated that while the train was stopped, carrying out its passenger service, a visually impaired man who was getting ready to get on that train fell from the platform of line 2 onto the down line. The man was carried from the track onto the platform by a PSP police officer and the ticket inspector, where they waited for the arrival of the emergency ambulance service (INEM). The PSP/CP police at Oeiras dealt with the incident. The injured man was taken to the São Francisco Xavier hospital.
12/12/2012	5909	ALGARVE	COLLISION	The driver of train 5909 stated that two people were hit by the train, on the right-hand-side to the direction of travel, and that they were part of a group of people who were walking on both sides of the railway track. They were injured and fell to the side of the railway track. The emergency ambulance service (INEM), the National Republican Guard (GNR) at Lagos, the PI, the PCC and Engineer FC were all notified. One of the injured went into cardiac arrest, and so medical assistance was provided in the middle of the railway track. The National Republican Guard (GNR) tested the train driver for alcohol. The track specialist was appointed local emergency manager. Category C emergency. The train left the site at 14:42. The emergency ambulance service (INEM) stated that the person who went into cardiac arrest in fact died at the site. Train traffic was suspended between the stations of Lagos and Mexilhoeira Grande from 14:46 to 15:13. The line was reopened to traffic without restrictions.

13/12/2013	16809	NORTH	COLLISION	<p>Stated that a man, who seemed to have slipped and was trying to get up, was hit by the train at the k.p. indicated. The ticket inspector called the emergency ambulance service (INEM) and the National Republican Guard (GNR) of Taveiro. A category C emergency plan was put into action, and the inspector was appointed local emergency manager. Traffic was suspended on the up line between Alfarelos and Taveiro. The train left the site at 11:09. The health officer arrived on site at 11:30, with the body being removed and the line being declared clear at 12:05. Circulation was stopped once again between 12:27 and 12:40, for the fire brigade to clean the track.</p>
15/12/2012	5724	ALGARVE	COLLISION	<p>The driver of train 5724 stated that the train had hit a man who was walking on the railway track, with the body being away from the track on the right-hand-side in the direction of travel. The emergency ambulance service (INEM), the National Republican Guard (GNR) at Faro, the PI, PCC and Engineer FC were all notified. A category C emergency plan was put into action, and the Traffic Inspector was appointed local emergency manager. The train left the site at 20:41, at which time train movement was restarted, with a speed restriction of 30 km/h between k.p. 343.700 and 343.900. The body was removed at 22:48, and the speed restriction lifted.</p>
16/12/2012	5911	ALGARVE	COLLISION	<p>The driver of train 5911 stated that the train had hit a person at the indicated k.p. who was travelling alongside the train on a motocross motorbike, on the right to the direction of travel, having stepped on the ballast because the berm had narrowed due to a culvert. The person was injured and was taken to hospital. The emergency ambulance service (INEM), the National Republican Guard (GNR) at Loulé, the PI, the central command post (PCC) and Engineer FC were all notified. The train left the site at 16:43. A category C emergency was determined. The infrastructure engineer went to the site, declaring the line clear without restrictions at 16:50.</p>
19/12/2012	135	NORTH	COLLISION	<p>The Alfa 135 train hit two females (a mother aged 30 and her daughter aged 13) at the entrance to line 1 at Alverca station. Both were killed instantly, their bodies being dispersed over the track. According to the driver, the two were walking along the line and had not noticed that the train was arriving, despite the horn having been sounded. The emergency ambulance service (INEM) and the PSP police at Gil were notified, a local emergency manager was appointed and a category B emergency was declared. Train 135 continued on its route at 17:44, having received authorisation to do so from the police. Line 1 at the station remained closed for the removal of mortal remains and cleaning, with train movement taking place on the down line between Alverca and Alhandra during the period indicated above. The line was declared clear without restrictions at 18:29.</p>
23/12/2012	621	MINHO	COLLISION	<p>The train stopped as it had hit a woman on the pedestrian crossing point at k.p. 6.620. The woman died instantly. It is presumed that the woman had crossed without due care and attention. The civil protection authority (CDOS) was informed. Also present on site was the emergency ambulance service (INEM), the PSP police - EIFPM of Maia and the Ermesinde voluntary fire brigade. Inspector PF was appointed as local emergency manager. Train 621 set off again at 21:37. Train movement was carried out using the down line, which proceeded on sight between k.p. 6.600 and 6.700. Traffic movement was</p>

				resumed on both tracks at 21:37, although still restricted to proceed on sight. The body was removed at 22:16, and the declared clear without restrictions at 22:25.
24/12/2012	806	WEST	COLLISION	A man was hit by the train at a pedestrian level crossing. The emergency ambulance service (INEM) and the National Republican Guard (GNR) at Malveira were informed. The voluntary fire brigade of Malveira and the National Republican Guard (GNR) of Malveira appeared at the scene. The train set off again at 10:25. The victim was taken, still alive, to Beatriz Angelo hospital.

Source: Annual Safety Report 2012, REFER.

**ANNEX G –
ACCIDENT PRECURSORS
2012**

PRECURSOR: SIGNALS PASSED AT DANGER			
Date	Line	Train	Description
17/01/2012 11:20	Sintra Line	95229	Locomotive 5607, while manoeuvring rolling stock at the station in question, passed signal SC3/M17 at danger. It had arrived at 11:15 (in operation 95229) on line No II for the purpose of reversing the direction of the traction unit. After the CP assurance and authorisation from the central command post (PCC), operation 91211 was carried out.
23/01/2012 17:26	Cascais Line	19672	The driver of train 19672 passed signal S7 at danger, coming to a stop at the platform of line IV.
28/02/2012 22:04:00	Alentejo Line	66585	In order to leave malfunctioning wagon No 933 0080-1, the CPCGSA requested permission from the REFER officer on duty at Poceirão station, who in turn asked the operational command centre (CCO) at Setúbal, for the manoeuvre of a section of rolling stock from train 66584/5, from line II-A to line VII (siding) where it remained. On carrying out the removal of the aforementioned wagon, without any new manoeuvre having been requested, block C-8 was hit in the closed position, leading to the derailment of the front bogie of locomotive 5621. The emergency train was requested, and for this purpose operations 96222 and 91207 were carried out. Emergency plan C was implemented. Re-railing was started at 01:30. A power shut-down was implemented at 01:35 (pate No 04/2012).
08/03/2012 10:54	Beira Alta Line	30408	Signals MAN S12/M12 and MAN STD were passed at danger. The crew was contacted, and were told to remain at Nelas. The central command post (PCC) was notified, and the inspector of the operations zone went to the scene, listened to those involved and carried out alcohol testing. The train proceeded after being told to do so by the central command post (PCC).
26/03/2012 15:45:00	Southern line		According to information given by the officer of CP Carga, locomotive 1446 was moving a section of empty rolling stock (14 wagons) from the port of Setúbal to line IV of Setúbal Mar. On going back on line IV with the aforementioned section of rolling stock, the locomotive came alongside another section of 14 wagons which were on that line, passing signal M22 at danger, and occupying the circuits of track C1 and points No 7. Occupation of the track circuits caused signal S8/M8 to change to stop for train 17232. Later, the rolling stock that was on line IV pulled out to clear the unauthorised occupations, derailing an axle of the locomotive on block C4. Signals S8/M8, S4 and S1 at Setúbal Mar were at danger for the same reason. The aforementioned operation was carried out with no intervention at all by any REFER officer. The emergency train was provided at the request of CP Carga. Help was provided under ME 91233 Barreiro 19:20 Setúbal-Mar 19:55, which returned to Barreiro in operation No 91236. Protection during re-railing was provided under Pate [technical assessment and intervention procedure] No 34/2012, with power shut-down and closure of lines III, IV, V and closure of lines II and IIA (with power kept on), between 20:11 and 21:50. Re-railing began at 20:11 and finished at 21:31. The track was declared clear at 22:48.
01/04/2012 17:21	Vouga line	5210	The CGO operator stated that the train indicated left the station, passing signal S3 at danger, with the operator not having carried out any operation at all to reserve the section of track. On questioning, the crew stated that signal S3 had a clear aspect and that the PDA had received messages correctly. Travel continued towards Sernada do Vouga, after authorisation from the central command post (PCC). The section of track between Pinheiro da Bemposta and Albergaria a Velha was therefore set at "uncontrolled stock movement" until 19:20, at which time it was

			dealt with by personnel from Alstom.
04/04/2012 01:09:00	"Ring" line	69160	At the time indicated, unexpected occupancy was found on the circuit of track CAED13, a track circuit downstream from signal S26 at Campolide. On being questioned, the driver of train 69160/61 stated that due to the weight of his train, he had allowed it to roll backwards, coming to a stop in the direction of the above-mentioned signal. The central command post (PCC) informed operator CP Carga S.A. The train remained at the site from 01:09 to 01:38 authorised by the central command post (PCC), after confirmation by operator CP Carga S.A. to continue its journey.
17/04/2012 16:45:00	Alentejo Line		When manoeuvres were being carried out from line VII to line IV with locomotive 1456, the latter started moving unexpectedly, before signal S14/M14 became clear, leading to the derailment of group of wheel No 4 on bogie No 2 on block C8, which was still closed. Due to this situation, and in order to re-rail the locomotive, Pate No 9/2012 was put into effect between 19:18 and 20:42. Re-railing started at 19:40 and finished at 20:35. The line was declared clear at 21:30.
04/05/2012 12:23	"Ring" line	95276	The rolling stock mentioned (locomotive belonging to Promorail) passed signal S30 at danger. Route S32/S40 had been established for train 14055 to leave on. Signal S32 changed to the closed position on occupancy of the circuit downstream to S30, with a new route having to be established for train 14055 after halting of operation 95276, which was authorised to return to line IV awaiting orders from management. The crew were tested for alcohol, with the results being negative.
12/06/2012 09:37:00	Beira Alta Line	98213	At the indicated time operation 98213 with 13 wagons and a length of 216 metres, set off, passing signal S17/M17 of line V at Mangualde station at danger, then undergoing a derailment of three wheels on the locomotive over C2. The central command post (PCC) and CP Carga were informed, who sent help.
20/06/2012 18:38	"Ring" line	18498	Train 18498 passed signal S11/M11 at danger. After passing the aforementioned signal, the train fell back without requesting authorisation from the operational command centre (CCO) at Lisbon. After guarantees from CP and authorisation from the central command post (PCC), the train continued its journey to Entrecampos-Poente, accompanied by a second official, where it was withdrawn from service.
26/06/2012 10:45	Leixões line	92243	After having entered line II, where it left its carriages, on manoeuvring the steam locomotive with two wagons onto line I under its own power, it passed signal M4 at danger, having caught the heel of point No 7. Repaired.
27/06/2012 19:45:00	Beira Baixa line	95223	On carrying out a reversing manoeuvre with a section of rolling stock in order to leave line IIIB in the direction of line I, signal M16 was passed at danger, and a bogie from wagon No 83719305268-0 was derailed on hitting block No 2, thereby causing it to occupy the circuit of points No 2-I, and inhibiting the opening of signals S3/M3, S5/M5 and S2.
20/07/2012 11:30:00.000	Alentejo Line	50831	In accordance with information from the duty official at the station, signal M29 was passed at danger during manoeuvres on the R2 of that station.
26/07/2012 09:54:00.000	Northern line	27503	The train in question passed signal S11 at danger, and reversed the train without receiving authorisation from this operational command centre (CCO), endangering the indicated trains. The driver stated that he carried out a stop by activating the CONVEL system. On the consoles of the Ground-to Train radio there was no record at all relative to this movement. The train waited on line VI in order for the alcohol test to be administered. After the test had been carried out, and the CP LC had given assurance as to traffic movement conditions, it was declared clear for departure at 11:13.

02/08/2012 13:19:00.000	"Ring" line	18456	Signal S11/M11 was passed at danger, and authorised to fall back to line I. The driver was accompanied in the driver's cabin by the ticket inspector as far as Entrecampos, at which point the driver was replaced.
09/08/2012 15:09	Alentejo Line		In order to move rolling stock, the CPCGSA requested the following manoeuvres: line VIII to line R-2; and line R-2 to line IV-A. For the first manoeuvre, the route was carried out in its entirety. After reaching R-2 and without having completed the routes, blocks C5 and C7 were inadvertently occupied, as were points 19, 21-I and 23. This operational command centre (CCO) was later informed that locomotive 1446 had totally derailed bogie No 1 and 1 wheel on bogie No 2, on block C-5. CPCGSA called for assistance. A local emergency manager was appointed. Responsibility for the occurrence was confirmed and dealt with locally by CP Carga. Assistance arrived at 19:03 on operation 91223, with a power shut-down requested at 19:10 when work started, finishing at 22:24. Power shut-down from 20:41 to 22:51 (Pate No 18/2012). The line was declared clear at 23:18.
02/09/2012 20:49:00.000	"Ring" line	18516	The driver of the above-mentioned train stated that the ticket inspector had finished his shift, and so he started up the train. On looking at the signal, which was at danger, he went to the emergency brake, but was unable to stop before reaching signal S 11. After communication via Ground-to Train radio, he was authorised to proceed, accompanied in the cabin by the ticket inspector. CP LX and the central command post (PCC) were notified.
17/09/2012 14:40:00.000	Alentejo Line	17106	On stopping at the above-mentioned halt/alighting point, 3 doors remained outside the station, so a reversing manoeuvre was carried out without informing this operational command centre (CCO). Signals 53D and 45D were at danger, the NCB command was implemented, which brought the signals back to normal.
27/09/2012 17:18:00.000	Northern line	15740	Due to the malfunction and detention of train 528 (occurrence No 138907), signal 3114 D did not open. According to the driver of train 15740, the Esmoriz circulation manager informed him to depart with the signal in question at danger. On being questioned, the traffic movement employee who was there on duty confirmed the situation, the non-opening of the signal not having been noticed due to the fact that it was not visible from the site (platform) where he was. At that moment he had allowed train 528 to pass, train 15639 had departed and train 64317 had passed, which is why he did not go to the station to check the aspect of the signal on the board.
15/10/2012 15:19	Northern line		During a manoeuvre with locomotive DH - 200 with removal of rolling stock at Cimpor 2 by employees from the factory, block 17, which was closed, was hit by wagon 3832230-0, leading to the complete derailling of the south-side bogie. The circuits of points 21 and 35 were occupied. The re-railing team arrived at 17:25 by road. The team consisted of 1 engineer, 1 technician and 5 labourers. Re-railing began at 17:40 and finished at 18:40. The line was declared clear without restriction at 19:00.
21/10/2012 00:30	Alentejo Line		A manoeuvre from line III to R-1 was requested and carried out. The traffic controller, working at the board, was later informed by the shunter from CP- Carga on duty at Poceirão, that they were ready to begin the journey to line III, route R-1 to line III was carried out with the clearing of signal M-12. As locomotive 4709 was on line VII, movement began, and after passing signal M-14 at danger, the four wheels were derailed on block C-8. The track specialist was appointed local emergency manager. The emergency train was requested at 00:54. Alcohol testing was carried out on the personnel involved from CP-Carga and REFER. Re-railing began at 04:15, finishing at 07:25, with a power shut-down carried out on lines V, VI, VII and VIII between 04:21 and 07:37. Re-railing was completed at 07:25, the track having been left with light damage to sleepers, rail fastenings and joint bars.

26/10/2012 10:22:00.000	"Ring" line	806	At the time indicated, the above-mentioned train passed signal ETC S11/M11 at danger. It was authorised to fall back to line I. The driver, on questioning, stated that there had been an error on the CONVEL system with code EC 50. He also stated that due to the brightness of the sunlight he was not able to see the aspect on the respective signal correctly. The central command post (PCC) and CP RG were informed, who dealt with the situation.
03/11/2012 13:31	Algarve line	571	Train 570/1, which was due to cross with train 5906, re-started its movement and passed signal S5 at danger. The route had been set for line II, for train 5906. It became immobilised on top of point No 2, which was caught on its heel and came out of gauge. The point in question was passed by the locomotive and by the first bogie on the 1st carriage. On the video monitors, the track circuit of line I and of point 2 was occupied, the latter without being proved for line II. Information that the driver had to activate the alarm came on the Ground-to-Train radio. In the meantime, the circuit of line I was no longer occupied, with the circuit of point No 2 continuing to be occupied, with the point unproved for line II. Attempts were made to contact the driver of train 570/1 by Ground-to-Train radio, but the communication could not be understood. The driver's mobile phone number was requested from the central CAT. The driver stated that he had not understood that signal S5 was at danger, noting that the points were inverted, and for this reason he immediately activated the alarm as a safety measure. The driver also stated that he was coming from Funcheira station with the CONVEL not working and he was accompanied by the ticket inspector, who, according to the driver, also did not notice the aspect of the signal in question. The driver of train 5906 was informed by Ground-to-Train radio, practically at the same moment as the alarm was set off, to halt immediately in order to avoid hitting the other train. This was carried out, the driver confirming that he had received the warning. Train 5906 stopped after the signal that had been passed, falling back to Boliqueime station as the track specialist had informed him that it was not possible to carry out crossings at Albufeira station. The return journey began at 14:37, arriving at Boliqueime at 14:50. Train 570/1 was given permission to continue the journey accompanied by a second official as far as Faro, so that they could be tested for alcohol, as agreed with CP LC and informed by the central command post (PCC). Movement was restarted at 14:54. Points No 2 were locked for line II, with speed restricted to 10 km/h between k.p. 307.300 and 307.500. Speed restrictions were lifted at 16:50, with the points in question set to line 2, the normal position. Repair is planned from Monday, 2012-11-05.
12/11/2012 09:59	Southern line	17218	Signal S4 was passed at danger. The train was travelling with the CONVEL system not working, accompanied from the start by a second official. This operational command centre (CCO) was not notified that this train was travelling with the CONVEL system out of order. Movement was restarted after higher-level authorisation.

PRECURSOR: BROKEN RAILS			
DATE	LINE	K.P.	DESCRIPTION
02/01/2012 15:10	Sines line	146150	This operational command centre (CCO) was notified of a broken weld at the indicated k.p. Train 96206/7 was warned to travel at 10 km/h between k.p. 146.100 and 146.200. A speed restriction was implemented at those k.p. at the time mentioned.
03/01/2012 09:16	Vendas Novas line	50950	Unexpected occupancy of the circuit of down line-1. The site was checked by personnel from Dimetronic, and a broken rail was found at k.p. 51.310. A speed restriction of 10 km/h was implemented between k.p. 51.305 and 51.315. After repairs were carried out, the speed limit was changed to 80 km/h.
04/01/2012 08:27	Western line	47100	A pronounced bump was noted at k.p. 47.100. Trains 6402 and 806 were warned to proceed on sight at that location. After inspection of the site, a broken weld was found at k.p. 47.295. Circulation was suspended between Mafra and P. Negro, between 09:55 and 11:00, for the fitting of joint bars, with the track being subject to a speed limit of 80 km/h between k.p. 47.280 and 47.230. A provisional repair was carried out.
09/01/2012 09:03	Northern line	44920	Track circuit AO2 of the VAO was occupied after the passage of train 80383. According to the technicians from Thales, who went to the site, the problem was a broken rail at k.p. 44.920, which created a distinct space between rails. The VAO was therefore closed to train traffic from 09:45 to 11:30.
13/01/2012 15:05	Beira Alta Line	58400	A crack was found on the rail at k.p. 58.400. A speed restriction of 10 km/h was put in place between k.p. 58.400 and 58.420. The site has vertical signalling, as well as CONVEL.
16/01/2012 09:30	Southern line	22732	The track team sent information via telegram No 08 that at the station in question the section of track between points 9 and 11 (inclusive) was closed due to a cracked points crossing. Awaiting repair.
16/01/2012 12:45	Southern line	128500	The driver reported feeling a strong jolt on the track at the indicated k.p. The infrastructure office was notified. After inspection, a broken glued insulated joint was found, and a speed restriction of 10 km/h was implemented between k.p. 128.470 and 128.530. The site has no signalling and no CONVEL. A provisional repair was carried out, and the speed limit changed from 10 km/h to 80 km/h from 16:00.
28/01/2012 04:50	Vendas Novas line	19475	Unexpected occupancy of the line II track circuit on passing of train 80381/0. The infrastructure office was notified. The Dimetronic official stated that he went to the site, and that the malfunction was caused by a broken rail. Trains therefore circulated on line I. While waiting for a definitive repair, a speed restriction of 80 km/h was established between k.p. 19.205 and 19.215 at the indicated time.

29/01/2012 05:20	Vendas Novas line	52400	Unexpected occupancy of track circuit 521. Does not permit the clearing of signalling between Lavre/Canha. The infrastructure office was notified. The Dimetronic official who went to the site stated that the malfunction was caused by a broken weld at the indicated k.p. Trains therefore to proceed on sight at that location. After provisional repair, a speed limit of 80 km/h between k.p. 52.395 and 52.405 was established at the time mentioned.
29/01/2012 09:45	Vouga line	26702	According to the driver of train 5108, at the time that the train was passing at the level crossing in question, he noted that the rail had splintered. Proceed on sight was initiated at the location until inspection by the track unit, which set a speed restriction of 30 km/h between km 26.680 and 27.030.
03/02/2012 04:20	Vendas Novas line	21475	Unexpected occupancy of circuit 234 not permitting the clearing of signals S-3, S-5. STA of the deviation - km 19.500, S-4. S-6, STD at Agolada. The site was checked by staff of Dimetronic, who stated that the problem was a broken rail. A speed limit of 10 km/h was set between k.p. 24.170 and 24.180, passing to 80 km/h after the track unit had carried out its intervention.
03/02/2012 06:47	Vendas Novas line	19475	Unexpected occupancy of circuit 248 not permitting the clearing of signals S-3, S-5. STA of the turnout - km 19.500, S-4. S-6, STD at Agolada. The site was checked by staff of Dimetronic, who stated that the problem was a broken rail. Circulation was established at proceed on sight at the location, until intervention by the track unit who set a limit of 80 km/h between k.p. 25.045 and 25.055.
04/02/2012 07:06	Northern line	30164	Broken rail at k.p. 29.170 (left side), causing occupancy of track circuit 295D with signal 295D at danger. At 10:50 a speed limit of 80 km/h was established between k.p. 29.175 and 29.165, no signalling and without CONVEL. At 11:20 this changed to signalled without CONVEL.
04/02/2012 08:05	Northern line	308770	As stated by the driver of train 15906 and later confirmed by the driver of train 15714, the rail on the left-side of the down line was broken, at k.p. 308.770, with signal 308.8D at danger. Proceed on sight was then imposed between k.p. 308.750 and 308.800. Provisional repair, with a speed limit of 80 km/h being established between k.p. 309.700 and 308.700.
06/02/2012 07:40	Cascais Line	9450	This operational command centre (CCO) stated that there was a level distortion on the up line at k.p. 9.400. As a broken rail was found, a speed limit was imposed on the up line between k.p. 9.450 and 9.460 of 10 km/h. This location is not signalled until further notice. The speed limit was removed at 10:05, reverting to normal speed.
06/02/2012 18:35	Douro line	59954	On leaving the station, a strange noise was heard on the track. Proceed on sight was implemented between k.p. 60.200 and 61.120. At around 19:00, the track unit found a broken rail at k.p. 60.700. A speed limit of 30 km/h was established between k.p. 60.675 and 60.725.

06/02/2012 19:48	Beira Alta Line	114700	The driver of train 5410 stated that he had felt an jolt on the MY at the indicated k.p. The supervisor who arrived at the scene at 20:20 confirmed that the problem was a broken weld. Until an intervention could be carried out, proceed on sight was implemented at the location. Repaired, and without restrictions.
07/02/2012 08:10	Beira Alta Line	140650	The driver of train 510 stated that when passing k.p. 140.650, he felt a strong jolt on the track. The driver of train 57341 was told to proceed on sight at that location. The track unit stated that the problem was a broken weld, establishing a speed limit of 10 km/hour between k.p. 140.625 and 140.675. At 10:40 the speed limit was changed to 60 km/hour, as the temporary repair had been carried out.
08/02/2012 21:34	Northern line	325200	Signal 3252A at danger. Information provided by the signalling staff indicated a broken rail at km 325.970. Trains are proceeding on sight at that location.
10/02/2012 07:02	Beira Baixa line	1500	The track 13 circuit was occupied, with the block pointing in the Abrantes to Alferrarede direction. Movements were carried out in accordance with special instructions, in line with complementary safety instructions (ICS) 38/04. On reaching the site, the Dimetronic technician found that there was a broken rail at k.p. 1.500. Traffic was stopped between Abrantes and Alferrarede between 08:57 and 09:21 in order to repair the rail, with a speed limit of 30 km/h set between k.p. 1.490 and 1.510. A provisional repair was achieved at 10:05, and at 10:47 the work was declared finished without restrictions.
10/02/2012 15:43	Southern line	118900	The driver of train 573 stated that at the indicated k.p., a pronounced bump was felt on the track. The infrastructure office was notified. Because of this, and until the track could be inspected, trains 672/3 and 80832/3 (who stated that the correct k.p. was in fact 118.840), 66582/3, 184/5, 69383/2, 69891/0 and 55984/5 were restricted to proceeding on sight at that location. A broken weld was found at k.p. 118.840. This was provisionally repaired, and a speed limit of 80 km/h was established between k.p. 118.800 and 118.900.
13/02/2012 05:24	Sintra Line	6370	A broken rail was found on line II at Benfca station, on the internal up line on points 4-II and 6-II. Train movements were carried out on the external up line, on line I. At 07:35 repair of the rail was completed, with line 2 continuing closed due to point 4II not working. At 08:57, Thales stated that trains pass on point 4II, which is blocked to the direct line, and which cannot be changed until it is repaired definitively. Provisional repair carried out at the indicated time.
15/02/2012 09:00	Southern line	95026	The driver of train 182/3 stated having felt an jolt on the track between k.p. 97.200 and 97.300. When the driver of train 68381/0 was asked to drive with caution, he stated that the problem was a broken rail at k.p. 97.314. On repair, a speed restriction of 80 km/h was imposed

			between k.p. 97.310 and 97.320.
16/02/2012 05:40	Vendas Novas line	3428	After train 50381/0 had passed, the circuit on track 23 was occupied. The site was checked by Dimetronic personnel, who stated that there was a broken rail at k.p. 3.015. Repaired.
17/02/2012 10:45	Southern line	125020	Stated that a broken weld had been found at k.p. 125.550. The infrastructure office was notified. A speed limit of 30 km/h was established between k.p. 125.500 and 125.600, for the passage of rolling stock and provisional repair of the anomaly. At 13:25 this was changed to 80 km/h.
01/03/2012 11:50	Western line	62224	Broken rail at the indicated k.p.. A speed limit of 10 km/h was established between k.p. 62.217 and 62.230. Circulation was halted between Outeiro and Pero Negro from 13:10 to 14:05 in order for the repair to be carried out. Two metal joint bars were fitted on the rail, and a speed limit of 80 km/h was initiated.
06/03/2012 18:10	Northern line	296973	The circuit of points 1-II and 2-II was occupied. Dimetronic personnel later stated that the malfunction was caused by a broken rail at km 296.130. At the request of track staff, a speed limit of 10 km/h was imposed between km 296.100 and 296.200. This was altered, at the request of staff, from 10 km/h to 30 km/h between k.p. 296.100 and 296.150 on the up line.
20/03/2012 06:34	Beira Baixa line	108400	Occupation of track circuit 1084 after passage of train 57351 due to a broken rail, leading to malfunctions at LCs 108.6 and 109.2. LC 108.6 was manned. Assistance was requested from the Barquinha National Republican Guard (GNR). Drivers were warned to proceed on sight and to receive confirmation of the arrival of the entire train at Entroncamento station, as well as from train conductors at Barquinha station. At 08:49 a speed limit of 10 km/h was set between k.p. 108.600 and 108.610, until further notice.
20/03/2012 21:20	Western line	31120	The driver of train 6411 stated that there was a broken rail at the k.p. in question. Repaired at 02:20 on 21-03-2012, with speed restricted to 80 km/h between k.p. 31.105 and 31.135.
02/04/2012 15:30	Northern line	217294	This operational command centre (CCO) was informed that there was a broken rail next to the stock rail of points 10-I. A speed limit of 10 km/h was imposed between k.p. 217.095 and 217.100 on the down line, a location that is not signalled and does not have CONVEL. After train 526 had passed, and due to the danger presented by this situation, the down line was closed between k.p. 217.100 and 217.700 starting at 16:04 so that the rail could be replaced. The track was declared clear at 17:25 with a speed limit of 10 km/h between k.p. 217.095 and 217.105 on the down line, a location that is not signalled and does not have CONVEL. Repaired, and line was declared clear without restriction.

02/06/2012 15:10	"Ring" line	10200	The driver of train 16532/3 stated that he felt a bump close to the k.p. indicated. Confirmation of this was requested from the drivers of trains 18274/5 and 16534/5, who confirmed the information at 15:32 and 15:38 respectively. Circulation was restricted to proceed on sight at k.p. 10.200 on the down line, for all rolling stock. The infrastructure duty manager went to the site, stating that the problem was that the joint head on the left-hand stretch of rail was broken. Circulation was suspended on the down line-R/down line between Lisboa Oriente and Chelas, to enable repair of the rail, from 18:12 to 18:23. Work was finished at 19:00, with no restrictions on the down line.
06/06/2012 14:00	Northern line	217100	Joint bars and normal insulated joints are broken at the indicated k.p. Repaired. A speed limit of 30 km/h was applied during this time between k.p. 217.090 and 217.110 - Northern line.
24/06/2012 13:45	Northern line	330300	The person in charge of ODT 167020 stated that at the indicated km there was a broken joint bar on the up line. Circulation was set to proceed on sight between k.p. 330.250 and 330.350. Repaired.
13/07/2012 01:48:00.000	Poceirão transition curve	6093	Track circuit E6 occupied on the passing of train 80389/8. The infrastructure office was notified. The Dimetronic team stated that the anomaly was caused by a broken weld. Repaired, with a speed limit of 30 km/h instigated on the down line between k.p. 5.200 and 5.210 of the Poceirão transition curve, until a definitive repair has been made.
24/08/2012 09:40:00.000	Northern line	231300	The points crossing of double slip crossing 26/I - 24/II is cracked. A speed limit of 30 km/h was imposed (telegram 39) by the infrastructure manager between k.p. 231.700 and 231.750, on the up line at 11:00 today - 24/08/2012 - until further notice. The location is signalled and has CONVEL. Resolved.
27/08/2012 10:45:00.000	Beira Baixa line	134919	Circulation of trains was suspended at the request of the infrastructure manager at 10:45 on line 1 at Abrantes station for the repair of broken rails, and to repair the gaps that these created. The problems were repaired and the line was declared clear without restriction to train movements at 16:45.
24/10/2012 15:30:00.000	Beira Alta Line	127150	Broken rail at k.p. 127.150. A speed limit of 10 km/h was established between k.p. 127.125 and 127.175 until further notice. At 19:10, after the repair had been carried out, this was changed to 30 km/h.
26/10/2012 00:05:00.000	Vendas Novas line	63800	A broken rail was found at the indicated k.p., on the right-side in the direction of the up line, by the Dimetronic team who were at the location in order to carry out a repair due to stolen cables (incident No 140467 of this operational command centre (CCO)). The infrastructure office was notified. Provisionally repaired, with a speed limit of 30 km/h being established between k.p. 63.795 and 63.805 until a permanent repair can be made.

PRECURSOR: TRACK BUCKLES			
Date	Line	K.P.	Description
06/01/2012 21:34	Beira Alta Line	123730	This operational command centre (CCO) was notified of a jolt at the k.p. indicated by the driver of train 5411, and confirmed by the driver of train 515 who proceeded on sight on that stretch of line. Repaired.
12/01/2012 07:30	Minho line	15425	The driver of operation 27073 stated that he felt a jolt between km 17.700 and 18. Trains are proceeding on sight at that location. On inspection of the site, a joint was found that was out of alignment. Repaired.
17/01/2012 06:30	Vouga line	52100	According to the driver of train 5201, at the time that he passed the site, an unusual shaking was noted. Train movement restricted to proceed on sight at that location, until the track unit can carry out an inspection. Repaired.
19/01/2012 17:32	Vendas Novas line	34345	Notified that at the indicated k.p. (points 2 at Q. Grande), subsidence was felt on the track. Trains were warned to proceed on sight at the k.p. in question. The track supervisor was advised, who, after inspecting the site, established a speed limit of 60 km/h between k.p. 34.340 and 34.350, at the time stated.
20/01/2012 13:16	Vendas Novas line	34340	The driver of train 80835/4 stated that on passing between k.p. 34.340 and 34.350, which has a speed limit of 60 km/h, a pronounced bump was felt on the track. The infrastructure office was notified. The speed limit was changed to 30 km/h between the k.p. in question at 15:10.
23/01/2012 11:10	Northern line	290030	There was a broken insulated joint at k.p. 290.030 on the down line. A speed limit of 80 km/h was established between k.p. 290 and 290.040.
24/01/2012 10:55	Northern line	306000	The driver of train 15817 stated having noticed a bump to the train at the approximate k.p. indicated. Track managers were informed, with circulation limited to proceed on sight at that location. This situation was resolved after four sleepers had had their ballast repositioned and had been levelled.
24/01/2012 11:51	Beira Alta Line	123600	On passing the k.p. indicated, notification was made of a bump on the track. After inspection by the track unit, a speed limit of 60 km/h was established between km 123.575 and 123.625, which is not signalled and does not have CONVEL, by means of telegram No 06 from the track unit at Mangualde.
01/02/2012 17:35	Vendas Novas line	45000	Notified that at the indicated k.p. a pronounced bump was felt on the track. The driver of train 67850/1 was warned to proceed on sight at that location. The infrastructure office was notified. A levelling defect was found, and a speed limit of 30 km/h was established between k.p. 45.430 and 45.477 until a definitive repair can be carried out.

06/02/2012 18:51	Sines line	151121	Notified that a strong shaking was felt on passing points-1 of the indicated station. Trains were advised to proceed on sight at that location. The track supervisor was notified. A speed limit of 30 km/h was established between k.p. 150.700 and 150.750 at the time indicated.
20/02/2012 03:10	Sines line	151121	Stated that on passing points No 1 at the indicated station, a strong jolt was felt on the track, on the right-hand side in the direction of the down line. A levelling defect was found, and a speed limit of 60 km/h was established between k.p. 150.770 and 150.900. The infrastructure office was notified.
20/02/2012 20:15	Douro line	58200	According to the driver of the indicated train, at the time that it passed km 58.200 the track was noted to be very unstable given the speed of the train. Following traffic is to proceed on sight between km 58.150 and 58.250, until inspection by the track unit. The line was declared clear without restriction from 21:27. Near the indicated location there is a speed restriction in place of 30 km/h between km 57.845 and 58.103.
28/02/2012 14:19	Northern line	185347	Information that at Soure station, between points 2-I and the platform, a strong bump on the track was noted. This was confirmed by the driver of train 4510. The track specialist imposed a speed limit of 60 km/h between k.p. 185.500 and 185.400, which is not signalled and without CONVEL. At 15:20, this was changed from k.p. 185.590 to k.p. 185.600 on both tracks, remaining without signalling and without balises. At 17:30 the speed was changed to 30 km/h on the down line, remaining at 60 km/h on the up line, with both then having signalling and balises as normal, with non-balise signalling on the wrong-track direction.
02/03/2012 15:28	Southern line	97400	The driver of train 66583 stated that at k.p. 97400 a jolt was felt on the track. Anomaly confirmed by train 573. The infrastructure office was notified. Traffic movement at the location is restricted to proceed on sight. Repaired.
31/03/2012 12:30	Beira Alta Line	80000	The driver of train 5402 stated that there was a bump at the entrance to the bridge at k.p. 80.050. This was confirmed by the driver of train 512. Only traffic on the down line felt the bump. Due to levelling defects, a speed limit of 60 km/h was imposed between k.p. 80.050 and 80.100.
05/04/2012 14:33	Vendas Novas line	15800	According to the train driver, a strong jolt was felt on the track at the k.p. in question. The infrastructure office and the central command post (PCC) were notified. On inspection of the track, a levelling defect was found and a speed limit of 30 km/h was set between k.p. 15.730 and 15.740.
17/04/2012 08:35	Southern line	101050	Stated that the glued insulated joint at the indicated k.p. is broken. Trains advised to proceed on sight at that location. A speed limit of 80 km/h was established between k.p. 101 and 101.100.

17/04/2012 13:53	Northern line	300776	During inspection of the catenary, under ODT No 156473, a problem was found on the down line at km 300.540. Traffic proceeded on sight at that location up to 14:25, at which time circulation on line II was suspended for work on the line, with down line operations carried out on line III. The passage of train No 62330 (line III) created unexpected occupancy of the track circuit for points 2, leading to signal S6 being at danger and the consequent release of the warning at pedestrian LC 300.581, momentarily. Circulation was re-established on line II at 15:40, with a speed limit of 30 km/h between km 300.550 and 300.520.
28/04/2012 11:50	Northern line	309800	The driver stated that strong shaking was noted on the locomotive at the indicated k.p. Track management was advised of this occurrence, and proceed on sight was established for all traffic movement between k.p. 309.700 and 309.900, until the site could be inspected. A speed limit of 80 km/h was established between km 309.700 and 309.900 from 15:00.
06/05/2012 10:10	Sines line	144000	The driver of train 91215 stated that a jolt was felt on the track. On inspection of the track, a levelling defect was found and a speed limit of 60 km/h was set between k.p. 143.900 and 144. The location is not signalled and does not have CONVEL.
07/05/2012 15:35	Sines line	143900	Stated that on passing at the speed limit of 60 km/h between k.p. 143.900 and 144, strong shaking could be felt on the track. The infrastructure office was notified. Changed to 30 km/h until a definitive repair can be made.
24/05/2012 17:00	Vouga line	33900	According to information provided by the conductor of train 5210, a kink was detected at the km in question. Proceed on sight was set for this location until the track unit is able to inspect it. Inspected and repaired from 19:30.
12/05/2012 14:05	Vouga line	13400	The driver of train 5111 stated that there was a kink on the track at km 13.400. Proceed on sight was established, with a halt at the site, between km 13.350 and 13.450, until track staff could inspect the site. The track manager stated that the restriction would remain in place until 17:30. Situation back to normal.
13/05/2012 16:45	Sines line	160700	The driver of train 66583 stated that a strong jolt was felt on the track. The site was checked, and due to misalignment a speed limit of 40 km/h was established between k.p. 160.900 and 161.000.
13/05/2012 18:45	Beira Baixa line	134919	Stated that on passing the points crossing next to points 1, a strong jolt was felt on the rail. Trains 5264 and 5625, instructed to proceed on sight at that location, did not note anything abnormal.
17/05/2012 14:36	Southern line	264200	Notified that at the indicated k.p. a pronounced bump was felt on the track. After checks on site, a speed limit of 30 km/h was established between k.p. 264.100 and 264.200.

17/05/2012 17:05	Southern line	264100	Stated that despite having complied with the speed limit of 30 km/h imposed between k.p. 264.100 and 264.200 (see our incident No 130644), a strong shaking on the track continued to be felt. And further stated that the speed limit seems to be too high. The track specialist was notified. At 17:53, the track specialist stated that he was on site with a REFER official in order to monitor the passage of train 674, and that the speed imposed is not too high, if the situation continues.
20/05/2012 06:05	Southern line	289770	Stated that a strong jolt was felt on the track between k.p. 292.850 and 292.950. On checking by track personnel, a speed limit of 30 km/h was imposed between the k.p. in question.
23/05/2012 10:42	Alentejo Line	41894	The crew of the above-mentioned train stated that on entering line II of the station in question, they felt a jolt on the line. The infrastructure office was notified. After inspection of the track, a speed limit of 10 km/h was imposed between k.p. 41.500 and 41.520 (line II) from 11:45.
24/05/2012 17:00	Vouga line	33900	According to information provided by the conductor of train 5210, a kink was detected at the km in question. Proceed on sight was set for this location until the track unit is able to inspect it. Inspected and repaired from 19:30.
29/05/2012 16:00	Beira Baixa line	5050	The driver of train 5622 stated that a kink was forming between k.p. 5.010 and 5.020, approximately. Train 542 was told to proceed on sight. At 16:50, after the arrival of the track unit, a speed limit of 10 km/h was set between k.p. 5.050 and 5.070.
31/05/2012 04:40	Southern line	260500	The driver of train 68892 stated that a strong shaking was felt at the above-mentioned k.p. The infrastructure office was notified. The track was inspected and an alignment defect was found. A speed limit of 30 km/h was set between k.p. 260500 and 260600, a location that is not signalled and does not have CONVEL.
31/05/2012 11:30	Southern line	264000	Stated that on passing the above-mentioned k.p., a strong jolt was felt on the track. The infrastructure office and train 62390/1 were notified, the latter to proceed on sight at that location. A levelling defect was found, and a speed limit of 30 km/h was established between k.p. 264.100 and 264.200 until a definitive repair can be made.
01/06/2012 16:43	Beira Baixa line	4900	Stated that on passing the indicated k.p. at a restricted speed of 30 km/h, a kink was found on the track. Proceed on sight was implemented. The infrastructure office was notified, which implemented a speed restriction of 10 km/h (k.p. - 4900 to k.p. - 5100) as advised. On arrival at the site (18:45), a suspension of traffic movement was requested between Abrantes and Alferrarede. The suspension was lifted at 20:04 with a speed limit of 10 km/h, and at 20:30 this was changed to 30 km/h. A Pate was carried out between 20:01 and 20:04 to try and adjust the catenary between the stations of Abrantes and Mouriscas (excl.).

25/06/2012 16:43	Beira Baixa line	5577	The driver of the above-mentioned train stated that they were in fact stopped at k.p. 5.100 due to a kink in the track, and conditions would not allow them to continue to run. They were authorised to fall back to Alferrarede station until track personnel could inspect the track. Circulation was suspended between the two stations until further notice. A power shut-down was carried out at 19:56 between Abrantes and Mouriscas to enable the catenary staff to align the catenary with the track. Power was back on at 20:35, and restricted circulation established with a stop at the site in question. Normal circulation was established at 21:00, with restrictions imposed at the site. Passengers from trains 5624 and 5625 were transferred by road between Abrantes and Alferrarede.
10/07/2012 19:00:00.000	Northern line	259000	The driver of train 127 stated that a strong jolt was felt on the rail on the right-hand-side to the direction of travel. Circulation was restricted to proceed on sight between km 258.950 and 259.050. The problem was a glued insulated joint that had dropped down. Repaired without restrictions.
16/07/2012 10:42:00.000	Sines line	160940	The driver of train 67981 stated that a strong jolt was felt on the track at the indicated k.p. Circulation at this location is at proceed on sight. A speed limit of 40 km/h was established between k.p. 160.900 and 161.000 by the infrastructure supervisor, after having inspected the site.
16/07/2012 16:34:00.000	Beira Alta Line	102368	Unexpected occupancy of the down line track 1 circuit, due to a malfunctioning glued insulated joint. The special traffic movement regime was imposed for down line trains between Canas de Felgueira and Oliveirinha, in line with complementary safety instructions (ICS) 38/2004. Repaired, with a speed restriction of 80 km/h remaining between k.p. 103.425 and 103.475.
16/07/2012 16:04:00.000	Cascais Line	21062	This operational command centre (CCO) was informed by the driver of train 19265 that on passing points 1 of the indicated station, a bump was felt on the track. This was confirmed by the driver of train 19267. According to the driver of train 19273, this incident is occurring at k.p. 20.750. Traffic movement has been set to proceed on sight when travelling through this location, until further notice. The imposition to proceed on sight was lifted at 20:46, with traffic now moving at normal speed. Repaired.
21/07/2012 11:00:00.000	Northern line	53975	The driver of train 510 stated that a bump was noted on the track on passing the indicated k.p. Circulation at that location was then set to proceed on sight. At 12:00, the track supervisor set a speed limit of 100 km/h between k.p. 53.980 and 53.970, a location that is not signalled and does not have CONVEL. Changed to signalled at 14:10.
23/07/2012 15:55:00.000	Vouga line	33900	According to the conductor of train 5211, there were kinks on the track between the indicated kilometres. Proceed on sight at this location. Repair planned for 24/07/2012.
29/07/2012 16:30:00.000	Southern line	230600	The driver of train 573 stated that a bump was felt on the track between k.p. 230.600 and 230.700. After inspection of the site by the infrastructure supervisor, a speed limit of 20 km/h was established between the indicated k.p.

30/07/2012 09:51:00.000	Vendas Novas line	15600	The train driver stated that a pronounced bump was felt on passing the k.p. indicated. The infrastructure office was notified. On inspection of the track, a levelling defect was found and a speed limit of 50 km/h was set between k.p. 15590 and 15610, a location that is not signalled and does not have CONVEL.
01/08/2012 07:00:00.000	Southern line	115726	Stated that a strong shaking was felt between the k.p. indicated. After on-site checks, a speed limit of 80 km/h was established between k.p. 115.726 and 115.748.
08/08/2012 15:10:00.000	Vendas Novas line	53200	The driver of train 68830 informed this operational command centre (CCO) that a strong jolt was felt on the track at k.p. 52.900. The Escaninha track specialist was notified. Trains were notified to proceed on sight. On arriving at the site, a problem was found at the k.p. mentioned. A speed limit of 60 km/h was established.
17/08/2012 13:25:00.000	Vendas Novas line	60980	The driver stated that strong shaking was felt when passing the above-mentioned k.p.. The infrastructure office was notified. Traffic movement set to proceed on sight at that location. On inspection of the track, a levelling defect was found and a speed limit of 60 km/h was set between k.p. 60.960 and 60.980.
20/08/2012 12:20:00.000	Northern line	229200	Several drivers had communicated the presence of a bump in the track at the indicated k.p. After checking, a speed limit of 30 km/h was set between k.p. 229.230 and 229.300, which is not signalled and without CONVEL.
22/08/2012 00:05:00.000	Southern line	230650	The driver of train 68890 stated that strong shaking was felt at the indicated k.p. After checks at the site carried out by the track official, a speed limit of 30 km/h was established between k.p. 230600 and 230700.
26/08/2012 12:02:00.000	Southern line	273000	The driver of train 95203 /2 stated that a strong jolt was felt on the track on passing k.p. 273.600. The infrastructure operator went to the site and established a speed limit of 50 km/h between k.p. 273.650 and 273.750.
29/08/2012 03:35:00.000	Southern line	230650	The driver of train 68891 stated that a strong jolt was felt on the track at the k.p. indicated. Trains were advised to proceed on sight. A speed limit of 30 km/h was established between k.p. 230.600 and 230.700.
03/09/2012 11:40:00.000	Southern line	115600	Stated that on passing between k.p. 115.600 and 115.750, strong shaking was felt on the locomotives. The drivers of trains 570/1, 670/1, 80383/2 and 55982/3 were advised to proceed on sight between the above-mentioned k.p. The site was checked by infrastructure staff, and a speed limit of 80 km/h was established.
05/09/2012 16:52:00.000	Beira Baixa line	980	Kink at the indicated k.p.. A speed limit of 10 km/h with a stop at the site was established between k.p. 0.900 and 1.000. A power shut-down was requested in order to check alignment of the catenary, which took place between 18:07 and 18:08. At 18:35, the speed restriction for k.p. 0.980 to 1.000 was changed to 10 km/h. Interventions are scheduled under Pate.
06/09/2012 03:40:00.000	Southern line	236600	Stated that a strong jolt was felt on the track at the indicated k.p. A levelling defect was found, so a speed limit of 40 km/h was established between k.p. 236.550 and 236.650.

07/09/2012 04:25:00.000	Southern line	293600	Stated that on passing the indicated k.p., shaking was felt on the locomotive. The drivers of trains 97202/3 and 182/3 were notified to proceed on sight at that location. On inspection of the track, a speed limit of 40 km/h was set between k.p. 293530 and 293620, a location that is not signalled and does not have CONVEL.
07/09/2012 16:40:00.000	Vendas Novas line	24650	Stated that there is a gap on the track at the indicated k.p., which caused strong shaking when the train passed over it. The track manager was notified. Trains were notified to stop at the site and to check conditions in order to proceed. A speed limit of 60 km/h was established between k.p. 24.640 and 24.660.
07/09/2012 18:09:00.000	Beira Baixa line	980	Information was received relative to a kink being created at the indicated k.p. Circulation between Abrantes and Alferrarede was suspended at 18:15, until inspection by the track unit. Scheduled to arrive on site at 18:45. The suspension was lifted at 18:50, with a stop at the site, and a speed limit of 10 km/h initiated between k.p. 0.980 and 1.000. Restrictions were lifted on the stretch of line at 20:00, with the speed limit of 30 km/h already in existence for that stretch of line remaining in place.
11/09/2012 12:25:00.000	Northern line	246900	The driver of train 4613 had felt that the track was uneven at k.p. 246.900 on the up line. Proceed at sight was established between k.p. 246.850 and 246.950 in order to confirm the irregularity on the track. The driver of train 4615 stated that the problem was a kink. Track personnel established a speed limit of 80 km/h on the up line between km 246.800 and 246.950 up to 31/09.
11/09/2012 13:20:00.000	Northern line	237600	The driver of train 4615 stated having felt strong shaking between k.p. 242.500 and 242.800, and so proceed on sight was established between the k.p. in question. Track personnel established a speed limit of 80 km/h on the up line between km 242.450 and 242.750 up to 31/09.
12/09/2012 14:09:00.000	Beira Baixa line	980	Train traffic was suspended between Abrantes and Alferrarede stations, at the request of the Abrantes track unit, between 14:09 and 15:15 due to an alignment malfunction on the track at the indicated k.p..
13/09/2012 19:15:00.000	Western line	27900	On passing between k.p. 27.900 and 27.950, train 901 detected a levelling problem on the left-hand-side to the direction of travel. This was confirmed by the crew of train 6406. Traffic has been warned. A speed limit of 30 km/h between km 27.870 and 27.910 was implemented. The location is not signalled.
14/09/2012 17:47:00.000	Southern line	19000	The driver of train 14088 stated that a bump was felt at the indicated k.p., on the left-hand rail of the down line. This was inspected by track personnel, with some levelling defects being found at k.p. 18.984. Repaired.
19/09/2012 16:22:00.000	Vouga line	22900	The driver of train 5211 stated that on passing the indicated k.p., a slight kink was found on the track. Following traffic was therefore notified to proceed on sight at that location, and to stop if necessary. The site was inspected by a manager, who declared the track without restrictions from 17:00.

20/09/2012 18:05:00.000	Alentejo Line	62800	Stated that on passing the indicated k.p., a strong jolt was felt on the track. The infrastructure office was notified. A defect was found on the geometric parameters of the track, and a speed limit of 120 km/h was established between k.p. 62.780 and 62.800.
25/09/2012 08:25:00.000	Beira Baixa line	117310	Bump on the expansion joint at the indicated k.p.. A speed limit of 30 km/h was established between k.p. 117.300 and 117.320, a location that is not signalled and does not have CONVEL.
25/09/2012 19:05:00.000	Southern line	7300	At the time indicated, this operational command centre (CCO) was informed that there was subsidence on the track, on passing signal 101A. Information confirmed by trains 14103 and 598. All traffic was ordered to proceed on sight when approaching the k.p. in question. The infrastructure office of the Setúbal operational command centre (CCO) was notified. Repair completed at 22:30.
26/09/2012 08:45:00.000	Northern line	239600	According to information from the driver of train 4605, the down and down lines at k.p. 239.600 are showing accentuated subsidence. Circulation was changed to proceed on sight between k.p. 239.700 and 239.500. After inspection by the maintenance crew from Aveiro, a speed limit of 80 km/h was established between k.p. 239.660 and 239.800.
26/09/2012 14:55:00.000	Vendas Novas line	53000	This operational command centre (CCO) was informed that a strong jolt had been felt at the indicated k.p. The track specialist and trains were notified to proceed on sight. After checks on site, a speed limit of 60 km/h was established between k.p. 53.000 and 53.010.
29/09/2012 15:35:00.000	Vendas Novas line	52900	Stated that on passing the indicated k.p. a strong jolt was felt on the track. The infrastructure office was notified. A levelling defect was found, and a speed limit of 60 km/h was established between k.p. 52.930 and 52.940. There was no negative effect on circulation, given that the traffic proceeding on sight at the location was running ahead of schedule.
17/10/2012 09:40:00.000	Northern line	147370	Due to flooding at the indicated k.p., a speed limit of 10 km/h was established between k.p. 147.350 and 147.400 on the down and down lines, which are not signalled and without CONVEL.
18/10/2012 14:40:00.000	Beira Baixa line	114585	Stated that the underpass providing access to line II at Lardosa has been flooded (about 1 metre of water). Movement of passenger trains was suspended on line II, as boarding and alighting of passengers could not be carried out under these conditions.

Source: REFER Annual Safety Report 2012

